Proceedings of the National Seminar on

Present Trends in
MUSEOLOGY

(3 - 4 December - 2003)

GOVERNMENT MUSEUM
CHENNAI

Proceedings of the National Seminar

on

Present Trends in Museology

Held on 3rd and 4th December, 2003

General Editor

Dr. R. Kannan, Ph.D., I.A.S.,
Commissioner of Museums

Editors

Thiru. K. Lakshminarayanan
Assistant Director of Museums

Dr. V. Jeyaraj
Curator, Chemical Conservation and Research Laboratory

&

Thiru. K. Sekar
Curator, Children's Museum

New Series - General Section - Seminar - Volume 3 - 2004

Published by
The Commissioner of Museums,
Government Museum,
Chennai - 600 008.

Edition	:	2004
Number of Copies	:	500

Copyright	:	The Commissioner of Museums, Government Museum, Chennai - 600 008.

Phone No.	:	91-044-28193778 (Commissioner)
	:	91-044-28193238 (General)
Facsimile	:	91-044-28193035
E-mail	:	govtmuse@md4.vsnl.net.in
Website	:	www.chennaimuseum.org

Price	:	Rs.210.00

Printed at	:	The Helios, Chennai - 600 094. Tel : 32735250

CONTENTS

Foreword - v

Summary of Proceedings - vii

Colour Plates - xv

MUSEOLOGY

Colour Plates - xxv

Present Trends in Museology - *Dr. R. Kannan* - 1

Pale Imitation : The Indian Response to Museological Change Today - *N. Harinarayana* - 18

Present Trends in Museology and the Dilemma They Cause to Traditional Museologists - *K. Lakshminarayanan* - 23

Social Mission of a Multi-purpose Regional Museum - a Successful Story of a Century - *Dr. J. Raja Mohamad* - 28

Present Trends in Museology - *Dr. V.N. Srinivasa Desikan* - 32

Present Trends in Museology - *N. Soundarapandian* - 40

Museum Evaluation in the Light of Modern Trends in Museology - *Dr. A. K. Chatterjee* - 45

Current Concept of Space Museum - *S.S. Narayanan* - 48

Role of Museum in Showcasing Art History - *Dr. Ramaa Narayanan* - 55

First Things First - *Prof. C. Panda* - 66

DISPLAY

Colour Plates - 77

Present Trends in Museum Display - *J.R. Asokan* - 79

Exhibition as a Medium of Communication - Present Trends - *R. Balasubramanian* - 88

Modernisation of Galleries with Special Reference to Museums in Tamilnadu - *J. Christy Veda* - 92

Art Object – New Ways of Seeing - *Durga Rajagopalan* - 98

Present Trends in Museology in Recreating of Cultural Contexts to the Ethnographic Exhibits - *Dr. C. Maheswaran* - 101

Display in the Government Museum, Sivaganga - *T. Packirisamy* - 109

Present Trends in the Botany Galleries - *M.N.Pushpa* - 112

Computer Application in Museography - *K. Sekar* - 117

Role of Information Technology in Museums - *Dr. S. Darsana* - 124

Models and Metaphor in Museum Display - *R.D. Thulasi Brinda* - 130

EDUCATION

Colour Plates - 139

Out-reach Programmes in the Government Museum, Vellore - *M. Gandhi* - 141

Present Trends in Museum Activities - *P. Jawahar* - 146

Present Trends in Museum Education in Government Museum, Chennai - *M. Mohan* - 148

Extra-curricular Activities –The Need for a Successful Museum - *P. Sam Sathiaraj* - 155

Corporation Museum, Visakhapatnam - Present Status and Development Plans - *Prof. E.V. Gangadharam* - 163

CONSERVATION

Colour Plates - 169

Current Trends in the Analytical Techniques in Museums - *Divya Durga Prasad, Y.A.and Dr.V. Jeyaraj* - 171

Environment for the Storage of Silk Sarees - *Bessie Cecil & Dr. V. Jeyaraj* - 181

New Trends in Conservation of Art and Cultural Objects - *Dr. V. Jeyaraj* - 188

Dr. R.Kannan, Ph.D., I.A.S.,
Secretary,
Department of Agriculture,
Agricultural Production Commissioner
and Commissioner of Museums,
Government of Tamilnadu.

Government Museum,
Egmore,
Chennai – 6000 08.

FOREWORD

The completion of 151 years of the Government Museum, Chennai is a great event that has been fittingly celebrated with a series of events. Its first International Seminar was held in December, 2001. A grand function in which the President of India, the Governor, the Chief Minister, the Minister for Education and other Ministers, the Chief Secretary in charge, diplomats, scholars, museologists and prominent citizens participated in June, 2003 was the pièce de resistance. This was to inaugurate the refurbished and new galleries, the conserved heritage Museum Theatre and compound wall as well as to release the record number of new publications brought out by the museum on one occasion (probably for any museum in the world). All the heritage buildings and the landscaped campus have been lit by façade and indirect lighting.

The Government Museum, Chennai has reached international standards in display and publications. The epilogue has been this National Seminar on 'Present Trends in Museology' to chart out the road map of where we go from here. The summarising speech delivered by me at the valedictory function summarises the proceedings of this seminar. At the valedictory function, in his speech, Thiru. S.Ramakrishnan, I.A.S., Secretary, Food and Co-operation, Government of Tamilnadu, made some important suggestions.

They have been implemented in varying degrees already.

One important milestone in the march of a great museum in time has been seen through in a fitting manner as Dr. A. Aiyappan, the Superintendent at the time of the Centenary in 1951 would have envisaged. My grandfather, the late Sri T.S.Padmanabha Iyer was associated with the Centenary Celebrations of the museum as the Engineer in charge of the Public Works Department. It is my good fortune to have been chosen by Fate to steer this museum through the 151st year. He could not have visualised this in his wildest imagination. We are but the children of Fate and reeds buffeted by the will of God. But great institutions go on forever. And I am sure so will this museum.

Chennai
25.03.2004

(Dr. R.Kannan, Ph.D., I.A.S.)

Summary of the Proceedings of the National Seminar on 'Present Trends in Museology' held as the epilogue of the completion of the 151st year celebrations of the Government Museum, Chennai (Madras) delivered by Dr .R. Kannan, Ph.D., I.A.S., Commissioner of Agriculture and Commissionar of Museums on 4-12-20003 at 16.00 Hours.

Respected Secretary, Food & Co-operation and former Secretary of this Department who was the driving force behind many of our achievements, Tbiru. S. Ramakrishnan, I.A.S., Thirumathi. Ramakrishnan, Thiru. K. Lakshminarayanan, all of our museological friends, Ladies and Gentlemen, I wish you all a very good evening.

As I stated in yesterday's keynote address to this seminar, this is the epilogue to the grand finale that was the 151st year anniversary celebrations with the President of India himself as chief guest, the Governor and the Chief Minister and a host of other dignitaries. With this function, the series of events, which started with the first International Seminar that this museum organised in 2001, ends to day. From now onwards, we will have other functions of course, but the 151st year anniversary celebrations cooclude on this day. I am very happy that Thiru. S. Ramakrishnan, who stood by us during many of our troublesome days and Thirumathi. Ramakrishnan are here. They are the persons who really deserved to be here. They have braved a lot of personal inconveniences to be here, which I do not want to dwell on. It is their commitment that brought them here.

I was narrating outside a story, which I heard from our Respected President, the great man, Dr. A.P.J. Abdul Kalam the other day in Anna University when he was talking about success having a thousand fathers and failure none. I have also written about that in my editorial in the 151st Anniversary Souvenir. It all ended well oo that particular day on 19th June, 2003 and therefore we could have the happy faces of the staff, who were photographed here along with Thiru. K.T. Narasimhan, who was a great source of support for us.

My mind goes back to the first event, the International Seminar held in 2001. On that day all the delegates from all parts of the world were here. It was the first International Seminar in the history of this museum and I was buffeted from every direction including some of the highest quarters of the bureaucratic level but unannounced there were problems from below as well. There were problems from every direction. If I was to go poetic, I would say that cannons to the left, cannons to the right, cannons in front and cannons behind and Kannan was caught in the middle. That was the charge of the life brigade. Unlike the light brigade, I did not perish that day neither did my team perish of Curators and other staff of this Museum, who were with me, who had worked very hard, because on the third row unannounced there sat a very quiet gentleman who had come to give his moral support. The same gentleman was not found on the 151st anniversary because we had every dignitary from the highest person in the land to the Governor, to the respected Honourable Chief Minister and the entire council of ministers, our Education Minister, the Chief Secretary in charge and other senior officials, and everybody who was somebody in town. And I said, 'you haven't come' and that persoo said, 'No, today you don't need me'. And the same person is here today, because I said you have to be here and he said any more orders for me. I said no more orders this is the only order. And you can guess who the person is. He is Thiru. S. Ramakrishnan. And I told Madam, Thirumathi.Ramakrishnan also to come. I said, 'Madam, you should also come for this is the day we will have the small but deserving audience of museologists from all over the country and they will appreciate what we stand for'. This is what we have been through to have got thus far.

There were five sessions in this seminar spread over two days on 3-12-2003 and 4-12-2003. In this seminar, we discussed in the first session, which was chaired by Thiru. N. Harinarayana, the former Director of this museum, papers on "Present Trends in Museology" by Dr. V.N Srinivasa Desikan, former Assistant Director of Museums. He defines a museum as an institution whose artistic and educational

materials are exhibited to the public. Most museums in India are financed by Government and as such the responsibility for care, preservation and exhibition entirely rests with the Curators / Conservators. The paper has taken up two topics (i) Acquisition of objects and documentation and (ii) Exhibitions. Dr. Ramaa Narayanan, Reader, Fine Arts Department, Stella Maris College, Chennai spoke on the 'Role of Museums in Showcasing Art History'. In her paper, she spoke on the four phases of the museum movement in India as an art historian. The first phase was the founding of Indian Museum at Kolkata, Government Museum at Chennai; the Prince of Wales Museum at Mumbai and National Museum at New Delhi. These are integral part of the museum movement of the nation. In India, museums are part of the colonial legacy. The Renaissance tradition of collection as practised in the eighteenth century in the West became part of the colonial culture in India. Many site museums, known now as archaeological museums were founded under the second phase. During the fourth phase, museological concerns dominated the museum movement all over the world and India was no exception. The public museums, among them the Government Museum at Chennai, are poised to meet the many challenges of a post modern society, yet hesitate to take the plunge. I feel that there is some confusion of the phases since the National Museum, New Delhi is a product of the post colonial era set up as a response of resurgent newly independent India on the model of the British Museum with collections from all over India. The Chennai museum has taken the plunge to modernize its display in keeping with world trends but tailored to the Chennai (South Indian) ethos. The third paper by Dr. C. Maheswaran, Curator, Government Museum, Erode, was on Recreating Cultural Context in Ethnographical Collections. The ethnographic exhibits lose their significance as and when uprooted from their original cultural contexts. Therefore, the curatorial staff is responsible for restoring the lost cultural contexts by employing suitable presentation techniques. A thorough knowledge of present trends in museology will help the curatorial staff with their techniques of presentation and keep them

on the fast moving track of modernisation. This paper also deals with some specific techniques like Dioramic presentation / Habitat presentation, Theme specific presentation / Thematic presentation, Wire-Mannequin presentation / Wire-Dummy presentation, Environmental approach etc. Dr. A K. Chatterjee, Keeper, Anthropology, Indian Museum, Kolkata (Calcutta) raised some questions. Mr. P. Rajamohan, Curator, Government Museum, Trichy talked about "The Role of District Museums in Safeguarding Antiquities and Art Pieces" for research and posterity. In Art Object – A New Way of Seeing , Ms. Durga Rajagopalan, Lecturer, Fine Arts, Stella Maris College, Chennai spoke on how the new art historicist methodology includes sociological and anthropological perspectives in interpreting an artefact unlike in the past when only the immediate background was looked at. She reinterpreted the Amaravati sculptures in the collection of the Government Museum, Chennai in this new light.

The second session on Chemical Conservation Trends was chaired by Prof. C. Panda, Curator and Secretary, Victoria Memorial, Kolkata. In the paper presented by Thiru. K. Sekar, Curator of the Children's Museum on 'Computer Application in Museography' he stated that museography denotes the entire spade work that needs to be done to convert the visualisation of the museologists into a real form. The specially trained skilled persons involve in this field are collectively known as museographers. Computer application and the utilisation of computer peripherals by the museographers in every aspect of museography was the main focus of this paper. He is playing a keen role in introducing information technology in this museum in all areas. There was a paper by Dr. S. Darsana of the State Institute of Archaeology, Art History, Conservation and Museology of the Government of Kerala, Hill Palace, Tirupunithura on the Role of Information Technology. Current Trends in Analytical Techniques in Conservation was dealt with by the Research Scholar of the Chemical Conservation and Research Laboratory, Government Museum , Chennai, Selvi. Y.A. Divya Durga Prasad. This was based

on her recent visit to USA. Such papers enable us to know the latest trends in the developed world. In 'Current Trends in Conservation of Art and Cultural Objects in Chennai Museum', Dr. V.Jeyaraj has highlighted the shift from chemical methods to physical methods in conservation especially in the case of bronzes. In her paper, 'Environment for the Storage of Silk Sarees', Thirumathi. Bessie Cecil a research scholor in conservation states that the micro and macro environment especially, the storage material is important for proper preservation. 'Exhibition as a Medium of Communication - Present Trends' is a paper in which Thiru. R. Balasubramanian, Curator for Archaeology, Government Museum, Chennai has stressed that a good exhibition communicates more effectively than words and does not come cheap. While dealing with 'Modernisation of Museums', Ms. J. Christy Veda, a research scholar from the Department of Archaeology, University of Madras has stated that unless one kept up with global trends in display, visitors will not be happy.

The third session was chaired by Prof. E.V. Gangadharam, who is very famous and probably the number one marine archaeologist in South India. He comes from Visakhapatnam, where he is the Honorary Curator of the Municipal Museum. Thiru P. Jawahar, Curator for Zoology dwels on 'Introduction of Animation in Display, Imparting Training on Different Facets of Museums in Museum Studies and Rendering Extension Services to different Target Group of Students'. He has been training people in preserving zoological specimens. The more than a century old specimens are kept worthy of display by the efforts of his department. Thiru J.R. Asokan, who is our Design and Display Curator who is really No.2 behind all the display here in this museum has stated in 'Present Trends of Display', that display has become so advanced as in developed countries that there may not be need to display the original object itself. This point he might have made based on the Holographic Gallery recently started in the Government Museum, Chennai. He compared the displays in the National Museum, New Delhi, National Museum of Natural History, New Delhi, Indian Museum, Kolkata; Science City, Kolkata

and of course our own museum. Tmt. R.D. Thulasi Brinda, Curator, Krishnagiri Museum spoke about 'Models and Metaphors in Museology'. She states that the metaphors of science are being used in archaeology in recent years and feels that this is the language of natural science and not human science. I think she had a good argument with Dr. S. Darsana on various aspects of her paper.

The fourth session was chaired by Dr. J. Raja Mohamad, Curator, Government Museum, Pudukkottai. Tmt. M.N. Pushpa, Curator, Botany Section presented her paper on the system of display in the Botany Galleries in the 1980s which was object oriented and the visitor oriented display now attracts visitors. Thiru. P. Sam Sathiaraj, Curator, Government Museum, Madurai spoke on the need for extra curricular activities for the successful functioning of museums and taking museums to the people. Thiru. M. Gandhi, Curator of the Government Museum, Vellore also spoke on the excellent outreach activities conducted by the museum. Thiru. T. Packirisamy, Curator, Government Museum, Sivaganga spoke on how he has changed the lighting arrangements and display in the Sivaganga with very limited resources. Prof. S.S. Narayanan spoke on 'Current Concept of Space Museum'. The NASA Museum acts as a model to be emulated according to him. Thiru. P. Soundarapandian, Curator, Government Museum, Udagamandalam spoke about how museums are classified. Prof. E. V. Gangadharam during his presentation he showed the valuable artefacts of his museum through slides. He illustrated how these artefacts have been neglected by showcasing the S.S. Jala Usha, which was the first ship built by India and launched by the first Prime Minister of India, Pandit Jawaharlal Nehru.

The fifth session was chaired by me. Mr. N. Harinarayana, our former Director displayed his nostalgia for the museums of the past and questioned all the new methods of display. He felt that a tourist orientation has been imparted with stress on attracting visitors. No doubt life was much simpler and the pace of change measured in decades rather than in days as at present. Thiru K. Lakshminarayanan,

Assistant Director of Museums was poignant in expressing the dilemma of one who had come out of the old school and found the need to adapt to the present mode of energy intensive high tech interactive display system. Prof. C. Panda, Curator of the Victoria Memorial, Kolkata spoke about his problems with the unions and how despite all that they have done a lot of good work. He felt that the Government Museum, Chennai functioned in almost ideal conditions with government support, no union problems etc. This was because it was headed by a senior I.A.S. officer who also combined in himself the latest in museology and adopted and adapted new ideas. Dr. A.K. Chatterjee, Keeper, Anthropology Section of the Indian Museum, Kolkata spoke on how they have modernised the Anthropology Galleries in the Indian Museum in keeping with the latest trends. Museums have to be taken to the masses. They should also serve as an input for policy makers. In my paper, 'Present Trends in Museology', I have stressed on how museums have to compete with other pure entertainment attractions like theme parks for visitors. Attractive high tech interactive display, Scenography and Virtual Reality are the key to attracting visitors. This is what has been done on a highly cost efficient basis in the Government Museum, Chennai. This has transformed most parts of the 19th Century museum into a 21st Century museum on par with world standards. The Web Site of the museum has been appreciated even by His Excellency, the President of India, Dr. A.P.J. Abdul Kalam. This enables a person in remote areas to access by sight many of our objects. Still, museums will continue to exist as the urge to physical interaction with objects will remain.

The last session was chaired by Dr. Rama Narayanan in which the social mission of multi-purpose regional museums was presented by Dr. J. Raja Mohamad, Curator, Government Museum, Pudukkottai because Pudukkottai Museum is a very big district museum and has a huge regional presence. 'Present Trends in Museum Education' by Mr. M. Mohan, Curator for Education, Government Museum, Chennai, spoke about the recent refurbishment of the

display in several galleries. Prof. Tawde of the Raja Dinkar Kelkar Museum, Poone spoke on 'Assembly, Repairs and Conservation of Museum Objects'. He showed some beautiful slides of Rashtrakuta sculptures from various regions, which he had gathered. With this the deliberations came to an end.

Valedictory Function Held at the Museum Theatre on 4-12-2003 at 16.00 Hours

The book, 'Tarangampadi (Tranquebar) Excavation and Conservation Report' on the work done in conserving the rampart wall and a part of the Dansborg fort in 2002 was released by Thiru. S. Ramakrishnan, I.A.S., Secretary, Food and Co-operation Department, Government of Tamilnadu. This book was written by Thiru. Subramanian, Archaeologist, State Department of Archaeology, Government of Tamil Nadu who conducted the excavation, it was edited by me since I directed the excavation and conservation spending many days there with the technical help from Thiru. K.T. Narasimhan, Superintending Archaeologist, Archaeological Survey of India (ASI), Chennai Circle and Thiru. Chella Pillai, Retired Assistant Archaeological Engineer, ASI. The book was received by Thiru. Sumith Nakandala, Deputy High Commissioner of Sri Lanka to India, Chennai. Thiru. K.T. Narasimhan described museums as the only informal educational institutions where even illiterate persons could get directly educated. The ASI was renovating the old Connemara Public Library buildings at a cost of Rs.1.2 Crores and 70% of the work was complete.

Thiru. S. Ramakrishnan, Secretary, Food and Co-operation and the former Culture Secretary, who delivered the Valedictory Address stated that museums should organise road-shows in schools and colleges to preserve history. The museum had progressed despite odds. Still it could have a few artefacts for 'touch and feel' for the blind. It could also have a separate section for Traditional Jewellery as India had emerged as an exporter in this sector. The design could be used by contemporary exporters.

Mr P A Ramiah, I.A.S , Secretary, Department of Tamil Development - Culture and Endowments lights the lamp on the inaugural day

Dr R Kannan, I A S , Commissioner of Museums delivers the keynote address

Mr K. Lakshminarayanan,
Assistant Director

Dr J. Raja Mohamad, Curator,
Government Museum Pudukkottai

Prof Tawde,
Raja Dinkar Kelkar Museum Pune

Dr C Panda, Curator and Secretary,
Victoria Memorial Kolkata

Dr A K Chatterjee, Keeper,
Indian Museum, Kolkata

Mr P Jawahar, Curator for Zoology,
Government Museum, Chennai

A Session of the Seminar is on

Mr R Balasubramanian Curator for Archaeology, Government Museum, Chennai
Presents His Paper

Mr M Gandhi Curator,
Government Museum Vellore

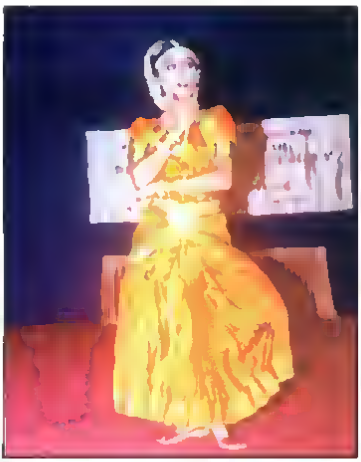
Prof E V Gangadharam, Honorary Curator,
Municipal Museum Visakhapatnam A P

Dr Ramaa Narayanan Reader in Fine Arts
Stella Maris College Chennai

Mr J R Asokan, Curator for Design and
Display, Government Museum, Chennai

Dr C Maheswaran, Curator,
Government Museum, Erode

Mr P Raja Mohan, Curator,
Government Museum, Tiruchirapalli



Cultural Show by Students from Stella Maris College, Chennai

Cultural Show by Students from Stella Maris College, Chennai

Cultural Show by Students from Stella Maris College, Chennai

Post Seminar Visit to Dakshina Chitra, Muttukadu

Mr K T Narasimhan, Superintending Archaeologist A S I – Temple Survey Project, Chennai Circle, Felicitates

Mr S Ramakrishnan, I A S , Releases a Book on 'Tarangampadi Excavation and Conservation Report' by Mr Subramanian and the First Copy is Received by Mr K T Narasimhan Dr R Kannan I A S , Mr K Lakshminarayanan and Dr. J Raja Mohamad Look on

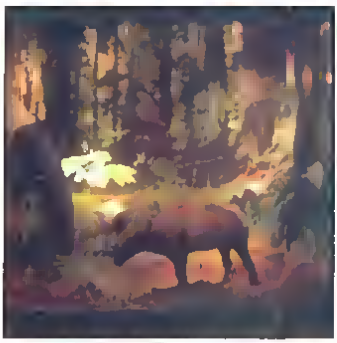
Mr S Ramakrishnan, I A S., Secretary Food and Cooperation, Government of Tamilnadu Delivers the Valedictory Address

Delegates of the National Seminar with the Guests

MUSEOLOGY

A View of the Holographic Gallery
Government Museum Chennai

Cosmic Nataraja Bronze Gallery



Tapir Diorama with New Technology

Painting Illuminated by Fibre-optic Lighting
Government Museum Chennai

Numismatic Gallery Government Museum Chennai

A View of the Science Park
behind the Children s Museum Chennai

View of the Modernised Bronze Gallery Government Museum Chennai

Front View of the Government Museum
Pudukkottai

Birds - Diorema Government Museum
Pudukkottai

A View of the Conservation Gallery

A View of the Lawn

Government Museum, Chennai

Present Trends in Museology

** Dr. R. Kannan*

Introduction

The Government Museum, Chennai is one of the great museums of this world. It has the second largest collection in India. It is the second oldest in India.

The completion of 151 years of this museum is a landmark event not only in its history, but also in the world of museology. On this momentous occasion, it gives me great pleasure to welcome the scholars from all parts of India and deliver the keynote address at this seminar.

This seminar is the final event of the celebrations and it is also the epilogue for these celebrations, where museologists have gathered to pause and take stock of what this museum stands for, what it has achieved and where it goes from here. We had the President of India, the Governor of Tamil Nadu, the Chief Minister, the Minister for Education and the entire council of ministers of Tamil Nadu and a host of scholars and dignitaries for the 151st year celebrations organised by this museum. We were overwhelmed by the praise heaped on us by the President of India for our Web Site, our new and reorganised galleries and our publications. There were emotional moments, when yours truly was mentioned by name by the President himself during the extempore part of his speech on a few occasions. This was the *Summum Bonum* of one's career.

Tamil Nadu is the cradle of civilisation of the world. Its rich artistic and cultural heritage has attracted traders and foreign visitors through the ages. Foreign visitors who paid visits in the past like the Chinese traveller Huien Sang have written extensively about it. It has many old towns and cities like Chennai, Madurai, Tanjore, Kanchipuram, Mamallapuram (Mahabalipuram) etc. Culture consisting of heritage

monuments, museums, performing arts and also nature especially its beaches have been major tourist attractions. Now, sanctuaries and amusement parks have also become a major draw.

Amusement parks are coming up in large numbers these days. Even though the entry fee is very high, visitor traffic to such parks is increasing day by day. Tourists flock to them. But they do not offer educational entertainment like museums. The more educated classes and older folk, therefore, still visit museums.

There is a sea change from the 16th Century concept of museums of a place where valuable antiquities were safely stored to the present day where museums aggressively woo visitors by imaginative and interactive new display and outreach activities that take the museum to the community. A short modern definition would be '**a Museum is a Service provider for the spread of Knowledge**' (Kannan Dr. R., 2001).

The museum profession has to take note of this change brought about among other things by new technology. It has to use these changes imaginatively for taking the museum to the people so that they continue to be relevant for educational entertainment. They must remain a 'must see' for tourists to any city. In these days of tight budgets, museums depend on visitors, especially inland and foreign tourists for their sustenance.

Hudson feels that a museum has to deliver value to a customer by its display and the courteous attitude of the staff (Hudson K., 1985, p. 8). Museum visitors are comparing them with other attractions and expecting international standards. Museums, these days, have also to compete with other interactive audio-visual media like television, computer games and the Internet for patronage from the public. Special exhibitions on some themes like "Tipu Sultan" or "Folk Arts" are held to attract visitors. These make the display to keep changing. Exciting interactive display techniques like the use of scenography

hold the key to attracting visitor traffic. The collections especially in history museums do not lend themselves so easily to interactivity with visitors as in science museums.

In the Department of Museums especially the Government Museum, Chennai use of new technology based on the power of the computer and more important training of the staff on this technology so that every one uses it has been a very important part of the change. We have used this technology for e-mail, scanning and storing of photographs on computer, use of these photographs and appropriate software for publications, digital photography, creating a web site and digitising the Accession Register in respect of the important 'AA' and 'A' grade objects. Use of Computer Aided Design and Three Dimensional Modelling have crashed the time and cost for new galleries besides making for prior visualisation in Virtual Reality. New types of display based on replicating international designs of showcases, modern lighting like Fibre Optics and Dichroic Halogen, Holographic Gallery, interactive Touch Screen display, luminescent slide screens and the prescription of international standards for material used in the display showcases are another part of the change that has taken place. These are physical manifestations of the mental change from blindly repeating what was done in the past to thinking afresh. These are radical changes in the staid world of museums.

The creation and management of change also extends to the 20 district museums under the Department of Museums and 17 site museums under the State Department of Archaeology. The two departments have been merged under one Commissioner recently

in order to have a holistic approach, which will create synergy. This has been undone recently.

We analyse how a participative approach, which had to be combined with the conventional Top-Down management approach has been used in the Government Museum, Chennai to bring about a vast change within the limitations of a government milieu. Practices from other museums have been also cited in order to analyse how they have managed change or blazed new trails. This is in keeping with the PRA approach of learning with and from others (Chambers, 1993). This has necessitated on the job and off the job training for the Curators and the need for the Commissioner to learn with and from the Curators sometimes and share his knowledge with several others. This has created the discipline of museology with the new trend of exploiting technology to make exhibits interactive in order to woo visitors.

Museums vis-à-vis Amusement Parks

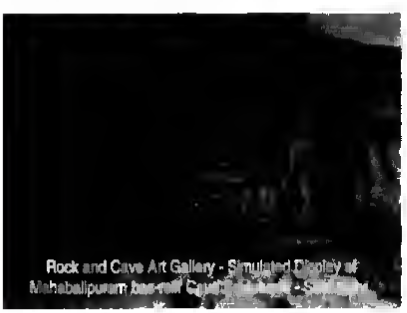
Museums like other tourist attractions can be classified by catchment area as local, regional, national or international depending on from where the visitors come from. The Louvre at Paris or the Government Museum, Chennai are international – their visitors come from all over the world (Swarbrooke John, 1999, pp.10-11). The number in India is more due to the size of the population but revenue is low. The population of India is still young and therefore the competition from theme parks and entertainment attractions is high, while the demographic change to mature populations in Europe may mean a swing to museums which are perceived as more educational than mere frivolous entertainment (Swarbrooke John, 1999, p.54). For foreign tourists, who are mostly culture tourists, a museum visit remains a must.

It has been found by market research that museums were more popular with the age group 25-54 and had a higher upper class patronage (Swarbrooke John, 1999, p.79). Segmentation of the

market according to the category of visitors and tailoring plans and strategies to suit the different segments is necessary, if a museum is to succeed. A government museum cannot deny access to any class of visitors but we raised rates to cater to a higher-class segment (Kannan Dr. R., 2002). In the Government Museum, Chennai we have half a million visitors every year. Our market niche is safe. The problem of competing for visitors is not very acute.

Scenography

Scenography is the design of the visual environment as an integral constituent of the display. This term is used usually in theatre for the design of the set (Reid Francis, 1996, p.99). Use is made of colour, shape and space to convey ideas and a story though the means and materials may be inexpensive (Howard Pamela, 2001). This idiom is adapted in museums for their display especially in dioramic and thematic displays. It is being increasingly used in order to attract visitors to museums, as an answer to the audio-visual onslaught by competing attractions. For instance, the museum for Peace, France claims in its Web Site that it uses original scenography and modern technology to display the history of the 20th Century. We have to use these changes imaginatively for taking museums to the people so that they continue to be relevant for educational entertainment. They must remain a 'must see' for tourists to any city. The privately owned Kerala History Museum at Cochin uses models, sound and light along with each frame to depict a landmark event as a scene from the history of Kerala. This is a great success. However, the technology is slightly dated. Still it simulates the atmosphere and sceoe of the event in the closed space of a



Rock and Cave Art Gallery - Simulated Display at Mahabalipuram bas-relief

museum gallery. In the Government Museum, Chennai, dioramas have been increased to a huge size in 2002 with the backdrop being computer generated photo-prints of real scenes lit with the latest lighting to make the visitor experience virtual reality. We have set up the **first Holographic Gallery in India.**

Dynamic Use of Collections for Educational Entertainment

Museum displays should interest the scholar and lay visitor equally. Otherwise they would not generate visitor traffic (Miles R.S. et. al, 1988, p.3). Successful attractions are based on a novel idea for exploiting the collections (Swarbrooke John, 1999, p.114). In India, the exhibition of crown jewels in the Hill Palace Museum near Cochin or the Nizam of Hyderabad's jewels in the Salar Jung Museum at Hyderabad is based on an idea, which is novel to that area.

The new Dinosaur Gallery in the Science Museum, Salt Lake, Kolkata with moving models, sound and light is an instance of such a novel idea attracting large crowds.

The display of the paintings of Raja Ravi Varma in Fibre Optic lit showcases is another instance of old static collections generating visitor interest by their new display. The Rock and Cave Art Gallery of our museum simulates the atmosphere of the caves of the pre-historic and historic periods using the latest technology. In the Government Museum, Chennai there are interactive models in the Children's Gallery, which attract children and adults alike. These objects entertain while they educate the public about themselves and their field of knowledge. Science museums like the Birla Science Museum

at Hyderabad lend themselves to interactive display more than history museums. We have tried to introduce interaction through visitor activated son-et-lumière display in our new Rock and Cave Art Gallery.

Marketing of the Museum, a New Trend

Marketing is the basic prerequisite if an organisation is to exist, survive and grow. It is an important subject in the discipline of museology. A museum also requires marketing. The visitors are the customers. Segmentation of the market according to category of visitors and tailoring plans and strategies to suit the different segments if the museum is to succeed is necessary. A government museum cannot deny access to any class of visitors. We noticed that the pilgrims in buses used the museum gardens for cooking etc., and incidentally some of them used to visit the museum. The damage they caused was considerable. Raising the entrance fee is not possible as this would lead to allegations of Elitism, which a public museum cannot afford. We therefore segmented our market into foreign tourists affluent and the back pack variety, affluent and middle class domestic tourists usually coming in taxis or tourist buses, the poorer people who come in excursions from rural areas, couples, lovers and students who visit from schools and colleges in groups. A small number are serious scholars. We have found that the non-affluent urban people are the ones who cause maximum damage by graffiti. All classes of Indian tourists are equally guilty of littering and causing traffic chaos. Planning has been geared mainly to attract more of the sections of visitors who want to use the museum as a place to learn or at the least do not damage the environment. We have managed to convince the government and increase charges to Rs.15/- per adult and US Dollars 5 per foreigner.

The Museum also owns an air-conditioned theatre, which is more than 100 years old and constructed on the model of the theatres of London. It is rented out only to programmes that cater to elitist tastes like classical western music, pantomime by the British Council

etc. It has recently been renovated according to the archaeological principles and the rent rates raised. This has resulted in annual revenue going up from about Rs. 9 lakhs per annum in 1999 to about Rs. 80 lakhs now for the museum.

Curatorial staff and the Commissioner go to schools, colleges and even social clubs like the Rotary Club and deliver talks, organise exhibitions etc., to get better visibility for the museum.

Training in Management for Curators and Assistant Curators, a Key Facet of Modern Museology

The principles of management were formulated in the '*Arthasastra*' of Kautilya, Roman Catholic Church and the Army, which remain the oldest forms of organisation. These principles have now been applied in hospitals and are equally applicable in a museum. A Director of a museum is like the Chief Executive of a business organisation. It is not necessary for him to know the nitty-gritty of each discipline in which the museum deals with subjects like art, zoology, anthropology, botany etc. But he must know enough to be able to ask informed and intelligent questions from the Curators who are in charge of managing the different disciplines like art, archaeology etc. This is more important in a multi-disciplinary museum like the Government Museum, Chennai. Even the Directors who have risen from the rank of Curator, though they had a proclivity to concentrate on their own disciplines a little more have had to also look after other sections in which they were not technical experts.

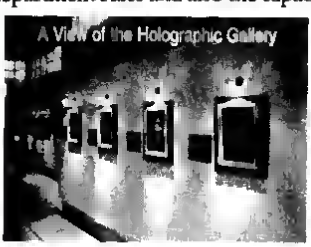
Execution of Projects within Tight Constraints

Projects like new buildings, galleries, reorganisation of galleries etc., have to be done quickly, efficiently with optimal use of resources and tight budgets. Projectisation has been done in the case of opening new district museums.

A chart using Critical Path Method has been prepared identifying bottleneck activities like purchase procedures, which take a long time

in government. Identification of activities and forming personnel into teams for completing the activities within a pre-set timetable has been done. We have organised and opened several district museums with in a record time of 45 days using this approach. Curators have been trained in these methods. The entire work of conserving and renovating the heritage buildings like the Museum Theatre, the heritage compound wall etc., reorganising of the old galleries like the famous Bronze Gallery and setting up of the new galleries and the publications were completed in a record time of about six months. This process is documented in detail in my articles in the 151st Anniversary Celebration Souvenir (Kannan, Dr. R., 2003).

Decentralisation is limited by the structure of government department rules and also the capacity of individuals. Hence the type of total decentralisation often seen in multi plant business is absent. However, the Curators in the districts due to geographical distance are pretty much the bosses regarding day-to-day activities. In fact, due to certain financial problems supervision is mostly by way of controlling spending.



Leadership has to be very difficult in a milieu where the system of rewards and punishments are not like in the private sector. Seniority plays the major role in promotion and job and salary security is assured. Motivating people is by personal example and use of Hygienic theory of removing the discontent due to avoidable inconvenience. Positive motivation like self-motivation is there in rare individuals. Mostly Napoleonic harangues backed by personal example and a judicious mix of praise and criticism does the trick. There is also public recognition of good service sometimes.

In view of the difficulties in supervising and motivating staff that

perform routine activities like Janitorial services, the ***Next Steps Approach*** of the British government of contracting out ***Non-Core*** activities, so that ***Core*** activities can be concentrated upon has been done. It is also easier to motivate the Core Professionals for whom Maslow's ***Self – Actualisation*** (maximise one's potential) is the ultimate motivation (Koontz H, 1990, p.302).

Training in Personnel Management, Finance, Office Procedure has been given to the Curatorial staff by the Commissioner and concerned subject specialists. This has been organised at various centres in the State in 2002.

Training to staff by participating in formal courses like Museum Management, design and display, participation in seminars like the International Seminar on Heritage Management organised by IIT, Chennai and on the job training to operate computers imparted by the Commissioner himself are some of the methods used to upgrade skill levels. Training is given abroad largely due to the efforts of individual Curators who are encouraged and provided materials for this.

Information Technology like use of Computers, Fax and E-mail with Internet facility was introduced in 1999 marking a quantum leap in technology. The Web Site of the museum (2001) is one of the three best in the world of museums and won praise from the President of India himself who browsed it for two hours prior to his visit to the museum. All technical staff including Curators now know how to use the software meant for pictures, how to take and display pictures of the artefacts and even CAD to a certain extent so that they are attractive on the computer screen. It is interesting to know that no outside agency developed the Web Site.

Use of Single Platform Method

The single platform method was adapted from automobile industry and used for organising the gallery and the documentation. As seen

above, the design was prepared by Computer Aided Design (CAD) and three dimensional (3D) modelling. The list of artefacts to be displayed was finalised based on the design. Then, the manual for these artefacts, which gives their typological and individual description with particulars such as their accession numbers etc., was written. Based on the manual, the labels both individual and descriptive and btochures for the galleries were prepared on the computer using appropriate software. This enabled us to crash what normally takes years in the world of museology into a few months.

Use of Power Tools

We were the first to use power tools in an Indian museum. These tools were used to remove the Amaravati limestone sculptures, which were deteriorating due to moisture absorption from the walls wherein they had been embedded 130 years ago. This was based on a seminar paper (Kannan, Dr.R., 2001).

Change in the Concept of Museums

The concept of museums has changed radically from functioning as mere storehouses of antiquities with the Curators functioning as their custodians. Now the role of museums is to **'entertain** while **educating'**. The non-profit orientation has also been challenged by some museums like Guggenheim as shown below. For them, museums have to create surplus to survive, renovate and grow just like businesses. Only they have not still become so commercial as to expect a dividend declaration for their owners. Museums do not wait for people to come as seen above. They go to the people. These changes have occurred mainly in developed countries especially, the USA and to a lesser extent in Europe and U.K. In India, change is slower but surely, we cannot remain static or we will meet the fate of the dinosaur. The Science Park for children is privately sponsored largely due to the efforts of the Curator of the Children's Museum.

Participatory Research

It must be recognised that research is an on-going activity. An

organisation either has a research orientation welcoming new ideas or it does not have one. It cannot be that for sometime only it has a research orientation. In this country, we search for quick-fix solutions even for research, without realising that they are long gestation period activities. In our museum, only applied research takes place, whose gestation period is low. Still, every activity is planned, so that the last minute panic associated with Indian government organisations is avoided. For each issue of the Museum's Journal, Curators are encouraged to read and share new ideas. The writer also goes to libraries along with Curators to get new ideas. Whenever, he gets some new idea he shares it with others in the spirit of participation. This makes at least the Curators who take interest technologically updated and smart. Therefore, an atmosphere for innovation is fostered.

Before the setting up of a gallery or reorganising a display, a brain storming session is held. The Curators especially the Curator for Design and Display, the Commissioner (the writer), suppliers and even the Public Works Department Engineers posted in the museum campus sit together, discuss and develop new displays and their design. This entails research into new materials, new designs etc. Outsiders (the Superintending Archaeologist, Archaeological Survey of India, Professors from IIT, a retired Archaeology Professor etc) who have experience in museum or other design or are knowledgeable are also welcomed to share their ideas. This system ensures that new designs, technology and techniques are generated and introduced.

Curators and the Commissioner (writer) actually go to the market, visit shops, have a first hand look at the products and then decide. They are not afraid of the dirt and grime of Indian markets. This helps them to work out the correct base cost. Therefore, theory is married to practice.

Design and Display

Use of Single Platform Method

In the automobile industry in an effort to cut down lead times for new models and costs, the technique of production engineering is to build one platform capable of being used for producing different models up to a particular capacity. I have adopted and adapted this method as a management professional to the creation of galleries and their documentation. In our recent galleries, the design was prepared by Computer Aided Design (CAD) and three-dimensional (3D) modelling. The list of artefacts to be displayed was finalised based on the design. This also enabled accurate estimate of the exact numbers that could be displayed. Then, the manual for these artefacts, which gives their typological and individual description with particulars such as their accession numbers etc., was written. Based on the manual, the labels both individual and descriptive and brochures for the

galleries were prepared by copy and paste method on the computer using appropriate software. This is the only reason for being able to crash what normally takes years in the world of museology into a few months. Still, we worked 18 hours a day for several months. The Bronze Gallery and other galleries like the Holographic Gallery, the Son-et - lumière Rock Art Gallery etc., are considered as technical and museological masterpieces and have won praise right from the President of India onwards.

These methods were used by the Curators and even the district museum Curator of Kanyakumari Museum to create the "Travancore Gallery' showcasing the history and memorabilia of the erstwhile Travancore State. They substituted the costly dichroic halogen bulbs and display methods with low cost equivalents and produced the same dramatic display effect as in Chennai.

This was inaugurated by the present Maharajah of the erstwhile royal family and won great praise.

Research in Different Subjects of the Collection Sections

Curators are encouraged by personal example of the Commissioner and some meritorious senior Curatorial staff to engage in research in the subject matter of their collections sections. The Chennai museum has long been famous for its publications, which are definitive works on their subject. For example, the Castes and Tribes of South India by Thurston, Bronzes of South India by P.R. Srinivasan. Some of the best known are the books on Amaravati collections by C. Sivaramamurti, Goli sculptures by T.N. Ramachandran, South Indian Temple Architecture by Gravely and Sivaramamurti, *Tirupparuthikunram* and Its Temples, a work on Jainism by T.N. Ramachandran, Roman and Byzantine Coins by T. G. Aravamuthan, Catalogue of Exhibits in the Economic Products Section Except Wood Specimens by S.N. Chandrasekhara Ayyar, Catalogue of the Batrachia Salientia and Apoda (Frogs, Toads, and Coecilians of Southern India) by Edgar Thurston and the work of Robert Bruce Foote can be readily recalled. In keeping with these traditions, the museum has brought out 16 publications on the occasion of the completion of the 151st Anniversary Celebrations, which was inaugurated by the President of India, Dr. A.P.J. Abdul Kalam on 19-6-2003.

Yours truly became a scribe working ghoulish hours in order to bring out the 20 World class publications including 5 Compact Disc videos, many of which I wrote myself, of course, with the assistance of the Curators and the Assistant Director in many cases. But the final proof, language, pictures and lay out all had to be a total personal effort. Nineteen hours a day for eight months in addition to managing the Agriculture Department of Tamil Nadu in the year of the worst drought of the century was a mind boggling challenge.

Conclusion

The discipline of museology has come a long way from the early days when it was a storehouse for artefacts. Therefore, there is need for specialised training in management, display techniques, marketing and communication apart from preservation for Curators and those who aspire to head museums. This shows that a basic degree followed by such a specialised training is needed for Indian museums to attain world standards of excellence. It requires world class management skills at the top level if museums are to successfully compete with other forms of entertainment and still be successful. This can be easily seen from the experience of the Department of Museums especially the Government Museum, Chennai.

Though new technologies like virtual museums and so on may bring images to the living room, nothing can substitute for the sight and feel of real objects. The 'Real Thing' always gives a thrill that can have no comparison. Museums are the only places that collect, preserve and attractively display reality i.e. objects. Therefore, given the capacity for adaptability of museums, they are bound to stay with our society forever.

The wise believe that :

'One touch of the Vernal wood can teach you more of man than all the sages can' - Wordsworth.

References

1. Herbert, David T. (1997) 'Conclusions' in *Heritage, Tourism and Society* Ed. David T. Herbert, England: Mansell Publishing Ltd., Wellington House, 125, Strand, London WC 2R 0BB.
2. Howard, Pamela (2001) 'What is Scenography', *Conference on Scenography* held at the Barnard Theatre Columbia University, New York, N.Y., April 5, 2001, Web site
3. Hudson, Kenneth (1985) 'Museums and Their Customers' in *Museums are for People*, Edinburgh: Her Majesty's Stationery Office, 13a, Castle Street, Edinburgh EH2 3 AR for Scottish Museums Council, County House, 20-22, Torpichen Street, Edinburgh, EH3 8JB.

4. Kannan Dr. R. (2000) 'Museum Management', Article in the *Museum's Journal of the Government Museum, Chennai*, October 1999 – March 2000, Chennai: Commissioner of Museums, Government Museum, Egmore, Chennai-600 008.
5. Kannan Dr. R. (2002) 'Managing Change in the Museum Profession' – *Journal of Indian Museums*, Vol. LVI, June 2003.
6. Kannan Dr. R. (2002) 'Museum – A bridge between Old Cities and New Cultures', *Journal of Indian Museums*, Vol. LV, Feb. 2002, New Delhi.
7. Kannan Dr. R. (2002) Museums, Scenography and Tourist Attractions – Paper presented at the 6th International Colloquium of the Association of International Museums of History, Paris at Lahti, Finland on 29-5-2002 in absentia.
8. Kannan Dr. R. (2003) *Government Museum, Chennai* - Souvenir to Commemorate the completion of one hundred and fifty one years, New Series – General Section, Vol.VIII, No.3, 2003, Published by Commissioner of Museums, Government Museum, Pantheon Road, Egmore, Chennai- 6000 08.
9. Kannan Dr. R. (2003) *Bulletin of the Government Museum, Chennai*, Monograph on the Rock Art and Cave Art Gallery, New Series – General Section, Vol.XVIII, No.1, 2003, Published by the Commissioner of Museums, Government Museum, Pantheon Road, Egmore, Chennai- 6000 08.
10. Kannan Dr. R. (2003) *Manual on the Bronzes in the Government Museum, Chennai*, New Series – General Section, Vol. XVII, No.2, 2003, Published by Commissioner of Museums, Government Museum, Pantheon Road, Egmore, Chennai- 6000 08.
11. Kannan Dr. R. (2003) *Manual on the Holographic Gallery in the Government Museum, Chennai*, New Series – General Section, Vol. XVIII, No.2, 2003, Published by Commissioner of Museums, Government Museum, Pantheon Road, Egmore, Chennai- 6000 08.
12. Kannan Dr. R. (2003) *Manual on the Numismatic Gallery in the Government Museum, Chennai*, New Series – General Section, Vol. XVII, No.3, 2003, Published by Commissioner of

Museums, Government Museum, Pantheon Road, Egmore, Chennai- 6000 08.

13. Kannan Dr. R. (2002) *Bulletin of the Government Museum, Chennai (Madras)*, Iconography of Jain Images in the Districts of Tamilnadu (Covering The Museums of The Department of Archaeology And Museums), New Series – General Section, Vol. XVII, No.1, 2002, Published by Commissioner of Museums, Government Museum, Pantheon Road, Egmore, Chennai- 6000 08.
14. Kannan Dr. R. (2001) Use of Power Tools in Conservation, paper presented at the Conservation Workshop organised jointly by INTACH, Chennai, Max Muller Bhavan and IIT, Chennai on 6-12-2001.
15. Kannan Dr. R. (2002) Use of Power Tools in the Restoration of Monuments, paper presented at the Conservation Workshop organised by IIT, Chennai on 8.03.2002.

* Dr.R.Kannan, B.Com., B.L., C.A.I.I.B., M.B.A., M.Soc.Sci. (Birmingham, U.K.), Ph.D., I.A.S.,
Commissioner of Agriculture and Comissioner of Museums, Vice-Chairman and Managing Director, Tamil Nadu Wasteland Development Authority etc., Government of Tamilnadu, Government Museum, Egmore, Chennai - 600 008, India.

Pale Imitation : The Indian Response to Museological Change Today

** N. Harinarayana*

The topic of the Seminar Present Trends in Museology is timely as it is good to review constantly the state of the art in any discipline to get at its moorings and its drift. Museology is not by itself a great discipline – it is an amalgam of several disciplines and several philosophical inclinations and has tended to adapt itself to the latest trends in these disciplines.

In recent times, the original principles on which museums were founded and had subsisted for a long time have been overturned, and new principles sought to be implanted in their place in the West and *ipso facto* in India. These new ideas made much of the fact that museum activity must be 'people-oriented' and not 'object oriented'. Museum professionals went into learned discussions on these terms and tended to make traditional museum Curators feel apologetic for the museum activities of yesteryear. It looked as if these professionals are the prophets of art awareness and ecological awareness spread through museum objects and specimens. It looked almost as if they would call a halt to making collections of objects and specimens so as to concentrate on using objects already available for spreading awareness of art and environment

It was definitely a laudable aim but not at the cost of de-emphasizing collection and of spreading the notion that educating people about art and science is a new found area of museum work, which was not thought of earlier. For example, just after the Reign of Terror, in 1790 when militancy had not abated, the Louvre Museum with its prestigious collections was opened and the words of the French

Minister at the inaugural function were to the effect the Museum would be open to all and whoever wants to learn from the masters could place his easel before any paintings he wants to draw and paint. There could not have been a better call to culminating art awareness and helping to spread it than this exhortation of the Minister. The opening of one public museum after another during the 18th and 19th Centuries was the result of the general dissemination of knowledge among people through the Encyclopedia Movement generated by Diderot in France. All this is said just to show that making museums people oriented is no path-breathing idea that some museologists discovered in the Seventies and the Eighties of the last Century.

Definitely museums have gained an importance in the world of to day. In newly emerged countries, which are part of the developing world, national museums were set up early after independence to signify the cultural uniqueness of the nation. Collections of art and heritage became a means of propagating national identity. In our country, though there were several well-developed museums already, the National Museum at New Delhi was established in 1950 and quickly made into the cultural arm of the nation. In the developed world, where already huge natural collections existed, the trend was to enlarge the collections to include masterpieces of other cultures as a part of the drive to study culture on a wider scale.

As a result, museums have increased their activities to make themselves more attractive and more striking. It cannot be said that this has been completely successful. To day there are several channels of entertainment urging for the attention of the public – channels colourful and more accessible like T.V. We may take the Chennai Museum as an example. Even, three decades back, a visit to the museum was a must on a first tour to Madras. It was on the itinerary of almost all pilgrims going down South and they use to come to the museum in large numbers, go through the galleries wide – eyed and go away possibly with memories of some of the exhibits seen;

the giant whale's skeleton, the small recreation of Yama's Darbar, some stone sculptures and some bronzes which they venerated. They spread out on the grounds and had a picnic. They enjoyed the visit and carried the small bits of pleasant experience to be regaled to others back home. Even now they come, but it is all changed and might be changed further for so many reasons as time goes on. I have seen similar crowds thronging the Salar Jung Museum at Hyderabad, the Indian Museum at Kolkata, the State Museum at Baroda, the Prince of Wales Museum at Mumbai to mention a few. Strangely the National Museum at New Delhi with the best presentation in the galleries does not have this crowd pulling capacity.

The second conspicuous trend in museology to day is the adoption of high-tech devices in all aspects of museum work. In Western countries, technology is updating itself and the new products it creates have to be used somewhere. In course of time, they begin to be used in museums for so many purposes – for improving display, for attractive interpretation of objects, and for conservation. The availability of technology leads to the temptation to innovate more than may be necessary. When the Louvre Museum, Paris was renovated some time back, they built a new structure of crystal clear glass and gray shinning metal for a new entrance to the museum. It was called the Pyramid and even designed by a distinguished American architect. Similarly when the Tate Gallery of London wanted to display its latest art acquisitions, it took over a long abandoned power station and transformed it with the help of Swiss architects and sizeable funds into "a vision, a museum for Europe, a museum for the whole world". It was actually a search for the spectacular, for the grandiose achieved at high cost.

These are possibly two of the many grandiose projects that define the modern trends in museology in the West. They employ what are called "state of the art" devices to innovate presentation, improved lighting, heighten the decor, controlled atmospheric conditions and create a fairy-tale awareness for the visitors to walk through and be

dazzled. Apparently the aim of these devices is to help us look at objects in a pleasant manner, at a leisurely pace. But actually these innovations are so overwhelming that visitors from India are struck with a determination to re-fashion our museums in a similar manner in the devout belief that we are bringing them up-to-date. The new galleries in the Chennai Museum exemplify this trend in museology in India. Such adoption of high-tech devices extends to conservation, documentation and security measures. Installation of these devices becomes an end in itself. Commercial interests stoke up this tendency in order to push their products. There is no effort to formulate our own standards of museum work and pursue than, employing where necessary suitable devices of to day.

The third significant trend in our museology is to team up with tourism and make the museum the handmaid of tourism. Now tourism is an industry, which thinks in dollars and sterling rather than rupees. Its aim is to attract foreign visitors and cater to their needs. Tourism circles have realised that museums are important cultural centres that foreign visitors wish to frequent and which have to be refurbished to suit the standards of these visitors. Such an approach ignores the requirements of our visitors. For instance, in this campus there was a canteen in a good two-storied building run by a reputed social service organisation. The Tourism Department took it over and put up the prices of things. The canteen folded up after some time, and the building itself has been handed over to another department for housing its office. Commercialisation of the Tourism Industry trend does not suit the museum ethos.

It does not mean that the museum should forsake improving its galleries. But it should be done on its own terms and for its own principles of putting across to visitors the message of its objects in its own way. Too much of emphasis on showcase, design, special lighting and special effects take away attention from the objects to these technological innovations. Though these innovations are all supposed to focus the visitor's attention on the objects, they succeed

only in drawing attention themselves. Those responsible for installing these devices also rather only almost the devices as unique advances in themselves.

Though it is good and necessary that we take the best of things from others and incorporate them in our million, it does not mean that we should think that the best exists elsewhere. In our museum world at least, where the objects of art are incomparable, we should have our own means of highlighting their aesthetic uniqueness and transmitting the message of their art, rather than go the whole long in our imitation of trends of museology elsewhere.

** Formerly Director of Museums, Tamil Nadu*
120, Big Street, Triplicane, Chennai - 600 005

Present Trends in Museology and the Dilemma They Cause to Traditional Museologists

** K. Lakshminarayanan*

Though the origin of museum goes back to the dawn of human civilisation, the concept of museum as an educational institution evolved in its shape in the 18th – 19th Century A.D. The cave paintings of prehistoric men of Europe and Asia and protohistoric mural paintings like those painted with labels describing the events and figures of mythological narrations on the walls of *Muruga* temple at Tiruparankunram near Madurai in Tamilnadu were the beginnings for the later development of museum as an institution. Those objects, which were displayed as objects of curiosity or glory in the earlier period museums, became scientific specimens during 18th – 19th Century A.D. Curators and Directors began to devote themselves to the study of museum objects and their classification. The introduction of scientific systems of classification and interpretation of museum objects in the functional system of museums enhanced their academic character.

In the 20th Century A.D., the role of museums is further refined. The eternal role of the museum has been defined now as that of the preserver and purveyor of cultural, historical, scientific and technological heritage. Museums preserve human heritage by keeping the objects of nature and culture of by-gone days in their proper settings in display cases and purvey thus the knowledge of yester years for education and enjoyment of one and all. As per the definition of the International Council of Museums, declared in the seventies of the 20th Century A.D., museums are recognised as a non-profit making permanent institution, in the service of society and its development and open to the public. Museums acquire, conserve, research, communicate and exhibit material evidence of human race

and their environment for the purpose of study, education and enjoyment.

ICOM's definition of museum underscores the following three basic points on which the edifice of museum has to be built. Museums are formed not to make monetary profit at its vulgar sense. Increasing efficiency and reducing waste is different from amassing money. Both are poles apart. Museums are to serve the society and for its development by sharing acquired knowledge. They should be open to the public. These three basic ethical codes of the museums imply the moral obligation of the Curators and Directors to be well-trained scholars with deep human sympathies. They should have belief in popular education and visitors' friendly approach.

The increase of museums in a great number in many countries of the world led to the formation of Museums Associations. These Associations by framing codes of conducts for the museum workers introduced new trends in the functional and structural systems of museums. They elevated the standard of museum service to that of a professional service. Job descriptions for various categories of museum workers from the level of Curators and Directors to that of guards and watchmen have been structured. A new discipline, which imparts knowledge and skill of museum concepts and practice, emerged to prepare people capable of running the museum. This new discipline, Museology describes the works to be performed by museum workers, their responsibilities, the skill and training they require, conditions under which they work and their relationship with other agencies. In museology, collection, classification and study, conservation, interpretation and display of museum objects have been described as the five basic fundamental tasks and ways and means of performing these tasks have been elaborated.

As most of the museums functioned till the middle of 20th Century A.D. either under the financial support of the governments or on the patronage of the rich elite philanthropists.

Curators and Directors of Museums did not have the burden of fund generating exercises and had their whole time to spend in the basic five fundamental tasks of the museums. But the decline of the liberal public and private patronisation and increasing trend in insisting the museologists to generate monetary resources for museums functioning put them in a dilemma. Now the question before them is whether to remain knowledge workers or to take a new role of entrepreneur.

Management and marketing two of the three modern concepts have already found their way to museum field also. Some museologists advocate the application of management and marketing principles in museum field to earn money for museum. The word management coined in the beginning in business sector as business management and soon gained a connotation for administration with authority and power. Business management is about the control and operation of business and its cherished objective is profit making. When this word management has been adopted in other fields, new words like power management and water management were evolved. In such usage the word management assumes certain dignity and implies the skilful use of means to accomplish the optimum benefits. In museological parlance, museum management should strive to use the means effectively to accomplish the dignity of serious scholarship and the acclamation for its noble service.

The authority who has the final say in any matter of an organisation belongs to the top management person of that organisation. The top management person need not be a specialist but must possess wisdom, a comprehensive outlook and the knowledge of the subtle ins and outs of human motivation. The person with these leadership qualities is an asset to any organisation or movement as long as he exerts his energies positively. He is equal to Plato's philosopher king and under the care of such persons museums will provide maximum service to the people. But when museums are entrusted with top management persons whose concern is profit rather than human

values and cultural development it becomes the story of the elephant entering the Chinaware store. In such cases museologists feel suffocating. While the top management persons thrust their decision rejecting the cherished concepts of museology, they find themselves charged with responsibilities alien to their abilities and intellectual viewpoints. In such situation, the traditional museologists find themselves in a dilemma whether to act for their adored concepts or for their livelihood.

In business world, management creates market and widen it to make profit. Marketing involves exploring, understanding, stimulating and satisfying the needs nf people to promote the sale of goods or service. Sales promotion itself is a subtle art, which calls for a very imaginative approach. Advertising is one of the means of sales promotion. Advertising tactics are built on the appeal to people's emotions. A salesman does not sell a commodity as such but sells certain satisfaction. A commodity can satisfy a variety of needs both real and imaginative. Buying atmosphere is another sales promotion factor. People visit departmental stores for fun and enjoyment. The glamour, energy and enthusiasm pervading in the departmental store turn the casual visitor in to an eager buyer.

As buying atmosphere helps sales promotion, the ideal museum atmosphere enbances museum's service condition. But the atmosphere conceived by the business people is different from that of a museologist. The buying atmosphere effected by the business persons is highly enticing and lavishly alluring. Here the aim is to induce the visitor to buy the commodity in the lure of the atmosphere rather than allowing him to learn the message of the objects displayed. In the museum galleries objects are kept to be viewed, observed and studied by the visitors. As such the display arrangement of the objects, the gallery architecture and the lighting of museum galleries should not side track the aim for whicb the objects have been displayed. They should not distract the attention of the visitors from the message of the objects. Museum gallery is different from a jewellery shop. Objects, should be accorded with prime place. The

other arrangements of the gallery should help visitors to have a direct communication with the displayed objects and to understand the original context of the objects.

The third trend now widely spoken in museum circles is the role of computerisation and the application of hi-tech devices in museums. With the help of these new technological devices three of the five basic works of the museum, the Display, Education and Conservation could be done more successfully. Computer Aided Design (CAD) is a versatile tool for designing show cases, gallery etc., in a short time. Computer Assisted Instruction (CAI) is immensely helpful to museum educator for his/her programme. Computer Aided Tomography (CAT) a scanning technique used to obtain a detailed image of a solid structure will be highly helpful for finger printing the valuable objects of museum such as the ancient bronzes and coins. The hi-tech audio-video equipments could be utilised in creating dioramas with animated models. In all these activities the help and benefit the museologists derive from computerisation and hi-tech application is tremendous.

The computer experts and hi-tech technicians of present day museums are the successors of yester year museums' artists, designers and modellers. They are museographers who concretise the vision of the conceptualists, the Curators and Directors. Driving knowledge for a car owner is an asset to him. But for that he could not turn to be a full time car driver. An over all view of the methods of the museographers will be much helpful to the museologists as the knowledge of the later's vision is helpful to the mueographer for his execution. Though both are complementary to each other one cannot become the other without leaving his forte. When the administration for the sake of economy demands the same person to discharge the functions of both the museologist and museographer, he is placed in dilemma. Now the question before him is whether to be an extraordinary one in his strong hold or to divide his time and energy to two different fields and become a mediocre one.

* *Assistant Director of Museums, Government Museum, Chennai 600 008.*

Social Mission of a Multi-purpose Regional Museum - a Successful Story of a Century

* *Dr. J. Raja Mohamad*

The Government Museum at Pudukkottai will be completing its Centenary in the year 2010. The Museum started with a few materials for the view of the public in the year 1910 is working hard to achieve its mission and goal by its multifarious activities.

Pudukkottai was the only princely State with in the present boundary of Tamilnadu, a tiny State with a very lower literacy rate. During the second half of the Century, the British administration encouraged the princely States to start museums in their States to preserve the cultural heritage of the respective areas. Accordingly many of the princely States started museums with the available artefacts. The Pudukkottai Museum was opened in the year 1910, in the small rooms of an old palace at Thirugokarnam, on the outskirts of the present Pudukkottai town. It is a least suitable building to house a museum but stands as an example as to how the authorities conceived the idea of a public museum in those days.

The museum was opened with a very small collections of objects in geology, arts and crafts and economic products. Exposure of even these objects to the rural population of the region, literates and illiterates, was a fascination. The people of the State, simple by nature enjoyed the things exhibited in the museum and shared the joy with others. In fact it was the only source to know about their cultural assets and natural resources. In the year 1910 about 5374 persons visited the museum most of them were illiterates, only 12% among them being able to write their names. The expenditure to the State was Rs. 1,500/- per annum (1910).

The museum attracted a large number of people in the succeeding years. The objects collected for various exhibitions in India and abroad enriched the collections of the museum and by 1930 it attained considerable improvements and again in the recent fifties it is being continued. The building though unfriendly in the sense of a modern museum architecture, the available space is best utilised to arrange the galleries. The building is by no means a yardstick to measure the contents inside. The collections have enlarged by leap and bounds, illustrating many branches intended for a museum, and now stands as a multipurpose museum of regional character. It includes the objects from geology, zoology, economic products, paintings, arts and industries, anthropology, archaeology, numismatics philately etc. The respective exhibits in these sections are comprehensively represented and some of them fairly exhaustive too.

The usefulness of the museum was well recognised by the people of the princely State. The Gokarnesa Brihadamba temple, near the museum was the tutelary diety of the Thondaiman ruling family and many festivals were celebrated in the temple throughout the year. Hence it was a place of cultural and religious importance not only to the royal family but also to the general public. Large crowds gathered for the festivals in the temple and they also thronged the near by museum and it was recreation, education and information centre to them. To quote an instance during the car festival on 25th July 1933 alone about 6545 persons have visited the museum, according to the Administration Report of the museum.

It is interesting to note that the princely State was bound by orthodoxy. The rulers respected the customs of the people. Monday afternoon was exclusively reserved for *gosha* women. By about 1935 all women were admitted on this day. This was given up after 1948.

The Pudukkottai Museum came under the control of the Government of Madras Presidency at the merger of the Pudukkottai princely State with Indian Union, after Indian Independence. It is

now under the administrative control of the Department of Museums, Government of Tamilnadu and it is the second largest museum in the State next to Chennai Museum.

As a multi-purpose museum, it caters the needs of the region as a visual education centre. It feels proud in declaring that in all these years it has educated thousands and thousands of illiterates, literates and students. An enquiry with a cross section of the population of Pudukkottai and its environs particularly octogenarians, we understand, that the museum was a source of inspiration to them and they still remember the message that they carried in their childhood. The VIPs who visit Pudukkottai find it a pleasure to visit the museum and they have left glorious remarks about the collections in such a small set up. The local schools and colleges find the museum as an extension to their classroom and frequently visit the museum. Now the museum attracts a lakh of people annually and admission was free till recently.

Reorganisation and modernisation of the galleries was taken up from 1970s. The old fashioned show-cases were replaced by modern built in showcases. The Platinum Jubilee of the museum was celebrated in 1986. Display methods were considerably improved with modern lighting arrangements. In the recent years, bilingual computerised labels have been provided to the specimens.

The growing awareness among the public that the museums are for the people, well applies to this museum also. The people of the region turn towards the museum to know about their history and culture. The visitors are heterogeneous having numerous variables in their educational and socio-cultural background, rural and urban setting. Visitors are free to enjoy the objects in the museum in their own way. The collections with the visual language serve all ages according to their interest i.e., casual visitors, students with full inquisitiveness, researchers seeking information on specific topics and it is not the experts alone enquire in to the facts for furtherance of

their knowledge but the rustic people also enter in for clarification on their customs and traditions. The zoological specimens, prehistoric materials, handicrafts, swords, spears and guns, sculptures and bronzes are things of joy for all kinds of visitors as we have found in our evaluation.

This multi-purpose museum is taken closer to the people by various educational activities. Training in museology to the students and teachers, lecture demonstrations of eminent scholars, competitions and cultural fetes to the students are a few to mention. The Curator and his team undertake field survey and study the monuments and temple in the region and new discoveries such as inscriptions, sculptures etc., are brought to the notice of the scholarly world. As a part of our educational activities we approach the people at their doorsteps and village environment, to create awareness among them about their cultural heritage and the need to protect the cultural properties in their area. This has brought popularity to the museum among the rural population. Small exhibitions are arranged during festivals in various parts of the district. Touch and feel programme to the visually handicapped is in our regular service.

Thus the Government Museum, Pudukkottai is looked by the people of the region as the store house of knowledge and really acclaimed as peoples' institution in the real sense. The social mission of this museum lives up to the expectation of the people, from the time of starting to this day and it is a successful story of a hundred years in museum education.

We are marching ahead in our goal to bring eternity to the social value of this region.

* *Curator, Government Museum, Pudukkottai - 622 002*

Present Trends in Museology

** Dr. V.N. Srinivasa Desikan*

Introduction

Museum is defined as an institution where artistic and educational materials are exhibited to the public. The term 'museum' has been derived from a Greek word meaning the Sanctuary of Muses, the goddess presiding over all learning and art.

Most museums in India are funded by Government. The responsibility for care, preservation and exposition entirely rests with the Curators.

Museum Performs Three Main Functions.

i. Acquisition and documentation of materials,
ii. Exhibition and care of materials,
iii. Providing different educational services, such as conducting guided tours and arranging popular lectures to benefit the student community as well the scholarly world.

For the present seminar, two topics are taken for review, keeping in mind the trends in the present day context. They are (i) Acquisition and documentation (ii) Exposition.

Acquisition and Documentation

Though the museum movement is nearly 200 years old, the word 'museum' is presently understood in the modern context, the concept is very old. The *chitrasalas* referred to in early works (i.e.) *Ramayana* and *Mahabharatha* are the art galleries of the modern days. They were long and spacious halls portraying the scenes, contemporary court scenes and portraits. According to Dr. C. Sivaramamurti, there were three types of *chitrasalas* (i.e.) palaces, public art galleries and private houses. There used to be long halls known as *vithis* (galleries). They were accessible to select nobles and for the public. Public

galleries were accessible and private galleries were selective ones and to restricted persons.

In the modern times, there were private collections in the palaces, royal families and ancestral families also. Incidentally it may be worth mentioning that with the Antiquities and Art Treasures Act, 1972, coming to effect, many of the art treasures/antiquities were either sold/ given as gifts to the museums. Even now private collectors, probably, in North India and some in South India have valuable priceless collections with them.

In the Government Museum, Chennai, there was an Art Purchase Committee for acquisition of art objects including the contemporary works. Contemporary works were acquired taking into consideration of the existing available works and artists' works.

Exchange of art objects with other museums/institutions has worked well in the early half of the 19th Century. By this, we could fill up the gaps in our display of different Schools of Art. In the last Century though there were some attempts in the correct direction, finally it could not be achieved for practical reasons (i.e.) the other museums expected much from us.

Under the circumstances, the main source of acquisition is only the solid availability of antiquities under the Treasure Trove Act 1878, which has helped in enriching the collections.

Documentation

During the late 19th Century A.D., objects were acquired by purchase and through the Treasure Trove Act. In the case of archaeological objects, those come under this group such as metal icons, stone icons, copper plate grants, coins and miscellaneous *pooja* articles, were registered in one and the same register along with the zoological, botanical and geological specimens. Then at that time, this register was known as Main Register Even now that Register (heavy bound

ledger like register) may be available in the Chennai Museum. The entries were made very meticulously (i.e.) description, location and the dimensions besides the source of those objects.

In the 20th Century, when archaeology and numismatics were headed by respective Curators (then known as Archaeology Assistant) then the objects pertaining to archaeology were entered in a separate register. Here also, bronzes were given a separate register. For other objects such as stone sculptures, paintings, woodcarvings, metalware objects etc., a separate register was maintained. In the course of time, copper plate grants were received in large numbers, which completed to maintain a separate register for copper plate grants alone. This trend in cataloguing has helped the scholars to specialise in the field of their choice.

In later 1980's, when separate section for art works was created, the entire collection of paintings – South Indian traditional, Rajput, Mughal, Deccan Schools and modern works (contemporary) were separated and given to the section.

In the last Century, besides the Accession Register, Card Index System was introduced in the respective sections and also one set of cards to be kept in the central place (near the Director's Chambers). This was done both on the basis of accession register and also on thematic basis. This helped the Curator, in holding thematic expositions, besides the usual monthly exhibition – Exhibition of the Month (based on location wise of the art objects).

Thus, it may be seen that in the field of documentation, much progress has been made, since the establishment of this museum.

Exhibition

In the late 19th Century, much importance was not given to the display of artefacts, in the sense, that modern concept was unknown to the museum personnel. With the available infrastructure and accessories, the objects were displayed.

In the early 20th Century, the objects were put on public view as and when they were received, by the museum. Of course, we have suffered from "over crowdedness" of objects and lack of space for exhibiting them. In earlier years, the bronze icons of the museum were divided into Saivite, Vaishnavite, Buddhist and Jain and were on display in two small rooms in the front building (behind the Museum Theatre). Academic data for these objects were never neglected. Wherever possible, printed labels were provided. Pure dedication and devotion speak the way in which these bronze icons were preserved.

In 1960's (precisely September 1963) the present Bronze Gallery was opened and bronzes hitherto on display in the Front Building and some from Reserve Collections were displayed for public view.

On the left side in the Ground Floor of the Bronze Gallery we had Vaishnavite icons, (according to the forms and incarnations) and on the right side Saivite icons (according to the aspects, Siva, Uma-Sahita etc.). Some of the bigger bronze images and rare images of importance found a place in the centre. In the Mezzanine Floor we had Saivite (Nataraja images) icons and on the right side Buddhist and Jain icons. In the rear room of the Ground Floor, minor deities found a place.

While opening of this gallery, much of the well-known bronzes, which were hitherto not on display were put on display.

We may say at that point of time (i.e. 1963) nearly one-third of the bronze collection was on display. This arrangement helped the visiting public to have a good view of the bronze icon spieces. But one difficulty was that the back view of these pieces kept in the show cases could not be seen because of the back side of the cases were covered with wooden partitions.

But this problem was solved, completely in the new arrangement done in 1992. In this year, lighting, label system and display cases were improved to a greater extent thereby all the four sides of the bronze icon could be seen by the visitors. The bronzes were arranged according to chronology, similar to the system available for the stone sculptures in the New Extension Gallery, near the main entrance.

Again recently, the galleries were completely reorganised with more bronzes coming for the visitors view, supported by modernised cases and lighting arrangements.

The changing pattern of the exposition of the bronzes in these years is a healthy one and no doubt it would undergo many more changes for the better understanding of the themes represented.

Paintings

Till 1984, the problem was lack of space for the display of paintings – which were distributed in two buildings – Mezzanine Floor of the Geology Gallery and the National Art Gallery. We have been fighting for a separate building since 1965 (if I am correct) and this was materialised only in 1984 when the present Gallery of Contemporary Art was opened. All the works of the artists right from Ravi Varma to the latest artist (based on seniority – chronology) were put both in the Ground Floor and Mezzanine Floor of the Contemporary Gallery of Art building. Again here we have made a judicious arrangement of exhibiting the works of the artists according to the dates of their composition/execution. This has helped the student – artist community to understand and appreciate and to learn about the earlier and later works of a particular artist.

Attempts were made for visual storage and much progress should have been made by this time. I came to know from the 151st Year Souvenir, that the visual storage has been introduced.

Special Exhibitions

The present day tendency in museums all over the world is to give importance and priority to educational activities, so that they could serve to the community at large.

One such example is organisation of temporary exhibitions/ exhibitions on special occasions. A separate hall or portion of a gallery is set apart for such exhibitions, so that the permanent fixtures in the regular galleries are not disturbed. Such halls exist in the major museums at Hyderabad, Mumbai, Kolkata and at Chennai (Centenary Exhibition Hall). The Government Museum, Chennai has fully utilised this hall for holding special exhibitions regularly.

Once the objects are in reference collection for a very long time, then those will be out of mind and hence out of sight. If we allow such things to happen, some materials like woodcarvings and limestone sculputres and sometimes paintings would be in a very bad condition. Hence periodic exhibition relevant to the museum and also understandable both by the layman and scholars have to be arranged. In this context when the International Campaign for Museum was celebrated in 1967, a special exhibition was organised, consisting three sections,

i Introductory section serving to project the functions of the museum,

ii Comprising a selection of outstanding recent acquisitions from the different sections of the museum and

iii Depicting a thematic exposition of the Temple Arts of South India.

This exhibition proved to be a great value in focusing the public attention of certain interesting recent additions or on certain special themes, ideas or principles of biology, art, archaeology, ethnology etc.

In many of these exhibitions, much of the available old materials in the museum were grouped, selected, re-arranged and re-assembled and conserved in such a way as to illustrate some topic in a most pleasing and instructive manner.

The Centenary Exhibition Hall in the Government Museum, Chennai has witnessed many special exhibitions of national importance. Some of them are important.

a. Birth Centenary Celebrations of Ananda Coomarasamy (1977); Poet Subrahmanya Bharathi (1982) and that of Prof. K.A. Nilakanta Sastri (1992) were conducted along with seminars/symposium in the respective fields.
b. Special exhibition entitled "India and Italy – Cultural Contacts through the Centuries"(1975).
c. Museum has also sponsored one-man shows of the artists P.L. Narsimhamurthi, K. Srinivasulu, S. Dhanapal and K.V. Vaidyanathan. Thiru K.V. Vaidyanathan has gifted his entire collection of portraits of VIPs and a full set of oleographs of Ravi Varma's prints to the museum.

Thus it may be seen that most of the galleries have undergone major changes (i.e.) Metalware Gallery (1965), then Industrial Art Gallery recently opened (2003) with some collections from the Metalware Gallery. Then the Bronze Gallery also have been reorganised from time to time (1963, 1992 and 2003) with the presentation of bronzes in a most pleasing manner.

The traditional South Indian Paintings and modern works of art were in one and the same gallery (of course in separate rooms/ halls), till 1984, after which modern works of art in all media – have moved to the adjacent Gallery of the Contemporary Art. Thus in the National Art Gallery only South Indian Paintings besides the paintings of the Mughal, Rajput and Deccan Schools are on show.

It would be in fitness of things that this trend of opening new galleries exclusively for each category is extended to form a Buddhist Centre and Woodcarvings Gallery in the Government Museum, Chennai. In view of a large number of antiquities in the present Amaravati Gallery and the existing space is not sufficient to reorganise the antiquities in a chronological order according to historical periods (Period I, II, III & IV), a new building may be thought of to house the above antiquities and also the excavated materials from Peddamudiyam, Sankaran Ramatirtham and Amaravati (now preserved in the storage). The entire set up could be named Buddhist Centre and the Nagapattinam and Amaravati Buddhist Bronze icons could find a place in the Buddhist Centre.

This would help in paying more attention to meet the ever-increasing demand on the subject "Buddhist Relics" to come under one roof.

Similarly a separate Woodcarving Gallery could be formed where all the existing ones in the Front Building (behind the Museum Theatre) and those in the storage, could be put together to form one exclusive gallery for woodcarvings in view of the fact that we have rare thematic representations in wood.

Conclusion

To conclude, it may be said that the art and cultural artefects are preserved and exhibited. All this is done by government funds – Taxpayers money. We Curators are answerable to the public. When we exhibit a particular object or set of objects in a particular sequence and manner it should be meaningful and we should make others understand the criterion behind such display.

* *Formerly Assistant Director of Museums, Government Museum, Chennai - 600 008*

Present Trends in Museology

* *N. Soundarapandian*

Introduction

Museum as per dictionary meaning of its primeval form is a seat of learning being temple or house of nine Muses of Greek mythology presiding over the arts and sciences. This means a place where our heritage is preserved, exhibited and researched upon and propagated with homage to deities of knowledge. But a museum today is an institution of art and culture and education in a non-formal way for excellence (UNESCO definition).

Function of Museums

The very basic, fundamental and characteristic activity of a museum will always remain the same, that is exhibition. The themes may vary, the methods may change, the technique may differ, the audience's scope and venue may alter, the soul of the museum and its exhibition are not changed.

Unlike the olden days when every object was put on show, museums now have started showing less but showing them attractively. The theme is more specific and its emphasis is on education through recreation. The exhibition is the only language through which a museum can communicate in order to make a direct impact on the masses on education.

Documentation

The field of museum documentation is another example where knowledge of the subject advancements in the field of electronics including computer technology has revolusionised the methods and techniques of museum including the documentation and the facilities that a modern documentation system can provide for information retrieval.

Display

Display of presentation plays a very important role in museums. The chief things to be borne in mind in display are the following:

1. Restrict the exhibits in each section to the minimum.
2. Show only the best and the most characteristic of a group.
3. Allow enough elbow room to the visitors
4. Put up the exhibits at eye level.
5. Put up proper but obtrusive labels at an insignificant but convenient spot against each exhibits.
6. Have pleasing natural colour background for the exhibits.
7. Provide seats for visitors to sit and examine the exhibits leisurely.
8. Take precaution against natural enemies of exhibits.
9. Have sections of moderate size to minimise the fatigue that would be caused to the visitors.
10. Between two sections provide a small room with its wall painted with pleasing colours and place there a few pictures of great beauty, a few items of furniture and a few flowerpots with sweet smelling flowers. These things will not only relieve the fatigue of the visitors but also make them feel fresh while seeing the exhibits in the adjustant section.

Synchronised Commentary

More striking and attractive than the chart or diagram is an audiovisual show in which something catches the eyes and ears of the visitors and makes them pause, look and listen.

An audiovisual grid involves quiet a deal of creative design and it involves a study of the capricious mind of the visitors. So it must be brief and lucid and apply them with just sufficient facts to trigger off this interest and hold it.

The commentary is one thing, recording it and linking it with light effects is another. Modern technology has placed at our disposal a

variety of gadgets that make such synchronisation possible at no great cost.

Such an exhibit was prepared for the Introduction Gallery in two district museums set up in recent years by the Department of Museums, Tamil Nadu. This exhibit is an illuminated map of the district with a synchronised commentary in which small bulbs glow at relevant places during the commentary. In Trichy Museum the synchronisation was achieved through a mechanical devise with a slowly rotating drum.

The aim of the illuminated map with a synchronised commentary in the Introduction Gallery of a district museum is to create in the minds of the visitor the image of the district with all its physical, historical, cultural and natural features. A design of such an exhibit involves three important items. 1) An attractively prepared map 2) A lucid commentary and 3) A synchronised mechanism for sound and light.

Fibre Optic Lighting

Fibre optic lighting has been found effective both on aesthetic and conservation point of view. The control units of the fibre optic lighting have been in over the existing showcases invisible to the viewer. Since the medium of the painting is oil, illumination level is kept around 50 lux. When the room is dark, fibre optic lighting highlights the display efectively.

Dichroic Halogen Track Lighting

In the Contemporary Art Gallery it has been designed such that the daylight directly enters the building through the ventilators and from the entrance to give natural lighting to the paintings. This design gave excess light and glare noticed on the painting. Though this design is energy saving, it is not in tune with the modern display technology developed in the West. A large ventilator running through out as an apron also lets in sunlight and heat. Originally there was light up to

1000 lux or more in some parts of the gallery and illumination by the spot lamps added to this.

The glass panes in the ventilator running as apron was painted black to cut off the day light. It was decided to have track lighting with dichroic halogen lamps to highlight the display of paintings to modern standards. This enables to have the right level of illumination (30-70 lux). The temperature is also appropriate to the preservation of paintings.

Holographic Gallery

Holography is the process of three-dimensional recoding of an object. This can be used for two purposes. A hologram can be used as a convenient medium for displaying antiquities. The valuable and rare antiquities can be stored in a safe place and their holograms can be used for the public display. This technique is particularly important for out station exhibitions and even for in bouse exhibitions if the object is very rare. This original will not be exposed to avoid theft and vandalism. When an antiquity is stolen and later retrieved holograms can come to the aid of an art expert in establishing the identity of the object.

Publications

Publication is one of the important tools to increase the number of visitors to the museum. They attract the foreign and Indian visitors to the museums. Posters, hand bills, newsletters, magazines, scholarly publications on museum themes to those who are interested the subject of art, culture and sciences.

Dispaly in Government Museum, Udagamandalam

The large sized stone sculptures have been displayed on masonry pedestals in the open yard in front of the museum. A stuffed leopard

Stone Sculptures on Masonry Pedestals

along with stuffed birds have been displayed suitably in dioramic showcases attracting the visitors.

As extension services, training programmes are conducted to college students in museology, epigraphy etc., with the help of experts in the field both with in and outside the department.

Conclusion

Museums have para organisations like Museum Society, Friends of the Museum, Museum Lovers Club, Cultural Forum, Museum Trust, Art Club, Neighbourhood Museum, Bal Bhavans, Lalit Kala Academies, Trekking Clubs, Cultural Centres and similar such art and other cultural organisations. These are museums like as well as museum related institutions. Often they are referred as paramuseums.

They are becoming popular because they are relevant to the contemporary needs of communities. The active participation of members is part of new relationship with museum itself. Information Technology and modern techniques of museography have made most of the museums under the Department of Museums, Government of Tamilnadu, as leaders in the field.

References

1. Journal of Indian Museums, (Editor) M.L. Nigam, Published by the Museums Association of India, New Delhi.
2. Aiyappan, A and Satyamurti, S.T., Handbook of the Museum Technique, Government Museum, Madras.
3. Museum's Journal, Vol. No. 3, October 1999 - March 2000.
4. Museum's Journal, Vol. No. 5, October 2000 - March 2001.

** Curator, Government Museum, Udagamandalam - 643 001.*

Museum Evaluation in the Light of Modern Trends in Museology

* *Dr. A. K. Chatterjee*

Evaluation of museums is very significant in the changing global scenario driven by the ideology of 'One world - One market- One civilisation. It also gains more significance where accountability of public institution goes towards society.

Museology is the science of museums, which deals with museums' activities, as a whole the role of the museums in a society. This science has concentrated the study of these museums which are the store house or repository of the antiquities of the cultural heritage of a particular country or a culture zone, i.e. museology deals with the tangible cultural heritage of a particular area.

Now it is evident that the existing training of museology is to study the antiquities and artefacts in relation to the history and archaeology of our country. If we review the museum movement in India as well as the development of museology in our country covering almost a period of two hundred years (19th - 20th Century) we shall see that the science of museum (Museology) has sprung up along with the growth of the museums, collection, which are mostly archaeological in nature with a few natural history specimens relating to the development of the Indian history at large.

Now-a-days, the definition of museum has changed. Museum is a place for entertainment and research and it should impart informal education to the society leaving the only responsibility as store house of cultural artefacts of a country. Naturally the science of museum has extended its horizon from the limited methodology of preserving, restoring and exhibiting the museum artefacts inside the museum to a wide range of new scientific methodology towards the

development of little traditions of a particular culture. The modern museology or Neo-Museology is very concerned to the development of societies i.e. intangible cultural heritage of a country. So we can say that neo-museology covers the modern trends in museology, which are being followed by the museum and the science centres of the Europian and American countries. Indian museums are also following the modern changes of museology in their activities. The applied part of museology is the basic concept of modern museum co-ordinators. So it is the time when museologists should come forward to study the different communities in the cultural label and also to study their different social institutions including the performing arts along with total material culture. Thus museologists may act as social pathologists who can detect the cause of social unrest and also the reason of ethnic crisis. Museologists should be given proper training for studying the rural folk and tribal culture to get the exempts and traits of homogeneous culture there by to focus the root cause of socio-cultural and technological change of a particular community. Museologists' sociological and cultural anthropological methodology will help to detect the cause of social mobility at large.

Henceforth, the modern trends of museology is to study the "man society" and culture at large which will ultimately help the administrators in formulating developmental policies for the development of rural communities of our country keeping their community's sentiment and ethnic identity intact. So museology is no longer a science of producing a good custodian of the national heritage simultaneously in modern times if it imparts training to make a good social scientist who can reach to the communities studying their cultural traits and can suggest the remedy for social unrest. If the modern trends of museology is to bring the national integration by developing better understanding of own culture and other cultures too, then modern museology will bring a perceptible change in the values of the people of a country at large.

References

1. Elwin, Varrier (1951) The tribal Art of Middle India, Oxford University Press.
2. Kopper, D.S. (1971) Tribal Art of India, Department of Museums, Baroda.
3. Tribal Art and Craft, Agam Kala Prakashan, New Delhi, 1978.
4. Kopper, D.S. (1970) Tribal Art and It's Place in Ethnological Museum, *Eastern Anthropologist,* Vol. 28, April, 1970.
5. Bazzal (1978) Its History and Culture Tripura, Delhi.
6. Chatterjee, A.K. (1986) Handicrafts Mirror of the Naga Culture, Indian Museum Bulletin, Calcutta, Vol.XXI.
7. Chatteerjee, A.K. (1991) Textile in Tribal India, Indian Museum Bulletin, Vol.XXVI.
8. Chatterjee, A.K. (1996) Proceedings of the Annual General Conference of ICR of ICOM held in India December, 1996.
9. Chatterjee, A.K. & Chatterjee Rekah, (2000) 'An Odyssey of the Art and Culture of the North East Indian Tribes', Indian Museum Bulletin, Vol.XXXX.
10. Chatterjee, A.K. & Chatterjee Rekha, Traditional Technology and Cultural Identity *'Kala'* The Journal of Indian Art History Congress, Vol. IV, 1997-98.

* *Keeper, Anthropology, Indian Museum, Kolkata.*

Current Concept of Space Museum

** S.S. Narayanan*

Introduction

Main idea and concept of Space Museum is to bring reality of Space Science development and Space Technology advancement in various form and venture in one place called Space Museum. Reality of space events are so fast and so many achievements happen in a fraction of a second.

To bring back into the record and space related collections as exhibits work of museum to make it as historical mood and mode is highly important so that **"Future ages will wonder at us as the present age wonder at us now" - great ancient Greek saying.**

This paper deals with all important aspects of contemporary involvement in space science, space technology, space application and space events.

It also gives ideas how to create and build Space Museum, how to update and prepare space exhibition etc.

Space as Science

During fifties, definition of Space Science was based as a whole assembly of several compounds of science with organised knowledge to accumulate various comprehensive elements of different disciplines.

"The space science may be defined as those area of science to which new knowledge can be contributed by means of space vehicles i.e. sounding rockets, satellite and lunar and planetary probes, either manned or unmanned. Thus space science does not constitute a

new science but represents an important extension of the ftontiers of such existing sciences as astronomy, biology, geology and the physics and chemistry of Earth and its environment and of the celestial bodies was the Samuel Glasstone finding in survey of space science.

Space as Technology

When space science developed more and more, the theory and laboratory discovery slowly stood alone to show its ability and capability.

When theoretical knowledge forged in to use for production, the purpose of technology development was fulfilled. Now the space technology is more fit to receive any space programme for successful operation.

Space Application

Space science became multi discipline with the support of the technology in various space requirement applications.

Applications are needed for space programme to help and manage in many ways of successful space orbit.

In India more than fifteen different space centres are special task force centres to fulfil ISRO national need to launch several types of satellites in the orbit.

Space Events

All advancement in space events' venture is filled with wonders. Words are beautified, poems are dreams, dreams come true with colour of nature when astronauts view of home.

After enjoying all the events it is necessary to select important one for museum purpose. It needs most experienced eye and highly qualified mind to study and select best space artefacts.

Space Museum

Space Museum is very recent establishment as the space science and technology. Creating and founding such a museum in size and quality required enormous budget and large space.

Creative mind and artistic involvement with space system applications are most important to form a Space Museum.

Contemporary Space Museums are necessary for the purpose of preserving original models or replica of space artefacts and related materials.

What to Collect?

Following are the list of materials and information for organising a space museum and related exhibition.

1. Early flights
2. Golden age of flight
3. "How things fly"
4. Exploring the planets
5. Exploring the universe
6. Space race
7. Manned Satellite
8. Unmanned Satellite
9. Space mission of the Earth
10. Space mission of the Moon
11. Foreign space programme (USA)
12. Foreign space programme (Russia)
13. International space stations
14. Human involvement in space

It is better to select one or two areas or go overall general aspect of Space Technology. Regular and traditional museum experience with continuous interest in space subjects will help.

NASM – National Air and Space Museum

When decision was approved, should be studied the best space museum as model if necessary.

National Air and Space Museum (NASM) of the Smithsonian Institute of USA is a fine model and example to study. It is the only one of the earliest well established space museums in the world with finest preservation of air and space artefacts.

History of NASM

The National Air Museum (NAM) was created as a separate bureau of the Smithsonian Institution by an Act of Congress on 12th August 1946. Twenty years later, its name was changed as National Air and Space Museum (NASM) as part of a congressional Act authorising a separate building to house its collection, which opened to the public on July 1, 1976. The NASM collection dates back to the closing of the 1876 Centenary Exposition in Philadelphia when the Smithsonian received a group of kits from the Chinese Imperial Commission.

In 1889, the string fellow engine became the first object accessioned into the collection. The collections of the museum were housed in the Arts and Industries Building in a shed in the South Yard known as the "Air and Space Building" and out doors in "Rocket Row".

The beginning of the conquest of space in the 1950s and 1960s helped to drive the renaming of the Air Museum to the National Air Space Museum and finally congressional of appropriations for the construction of the new museum in 1971.

After the ground breaking ceremony held in November 1972, work on the new building proceeded on two fronts – 1. the actual construction of the building and 2. work by the staff on two dozen exhibition halls.

The staff moved into the museum in 1975 and completed preparations for the July 1, 1976 opening, part of the Smithsonian's contribution to the Bicentenary celebration. During the 1980 the Museum began to focus more directly on its research component.

Updating

Updating in traditional museum is adding new discovered historical artefacts. In space museum getting all the informations and storing them in hard disc or CD, DVD etc., are very important function in Curatorial departments to increase public programmes. Space Museum should have web site with interactions and exchange of information. Museum Internet connection will increase archival records.

Space scholar committees will help to give advise how to get space artefacts and how to develop good relation to receive them as permanent or loan basis for space museum from various space centres.

Inviting papers to speak and granting fellowships to do research works will help to update.

How to Update ?

Let us take three major space centres (one in India and two in USA) as source centres to update and let us see how to update.

1. In India we are having very famous Indian Space Research Organisaion (ISRO) Web site: wwwisro.org

2. International famous American Space Centre is National Aeronautics and Space Administration (NASA) website: www.nasa.gov.

3. Smithsonian National Air and Space Museum (NASM) web site is : www.nasm.gov

Every website consists of one or more documents called pages. A home page is the first page of a web site that serves as an introduction to the whole site. In home page there is navigation bar containing web links.

For example, when one browses NASM home page, one will see site Map, contact us, help, search and advanced search.

You will also notice: Visit, museum, news & events, exhibitions, collections, education, research get involved, over view, Paul E Garben Facility, history, FAQ Departments and staff, publications and contact info. Through the above links one can navigate all the interested pages and learn required information.

In space channel, view show and slide shows are available to view with sound. One will notice glossary from A to Z where meaning of space related words appeared.

There is Astrobiology Art where 32 Albums with 1300 pages of many pictures to view and enjoy. Through "Amusement" link one can wonder space Odyssey.

In our own Indian Website www.isro.org one can navigate through interested links. one will learn how ISRO is growing so fast in real time. Million of lines of information about space are available for us. Through these links which are more useful while thinking about creating a space museum.

Conclusion

Learning systematically and applying them in knowledgeable way those links are greatly helpful for our Space Museum Projects.

narayanansivas@yahoo.com.

Courtesy: 1. NASA 2. NASM 3. ISRO 4.USIC (Madras) and others who helped to write this paper - SSN

* *Faculty, Bharathidasan University Distant Education, Chennai Centre, Chennai. IEEE-millenium medalist and Senior Member: Aerospace & Electronic System Society – USA.*

Role of Museum in Showcasing Art History

** Dr. Ramaa Narayanan*

Museums of India are part of colonial legacy. Museums are Western enterprise. In India, the seed was sown during the Colonial era and has grown and expanded to a significant movement of India. The museum movement is one of the constructive forces in the changing social structure of a democratic country. In recent years, innumerable museums exhibiting various types of art and architectural as well as science and technological objects have grown in good stead. Government – managed public museums stand like monoliths amidst the many museums in the country which are managed by societies, universities, private trusts etc.

India possesses a link and continuous history of art. In a democratic, thickly populated country like India, which is also characterised by cultural diversity, public museums are feasible as cultural apparatus and educational agency. The agro-industrial nature of the nation writes its story too, through the museums. Government – run public museums often become the 'cultural consciousness' of the nation. Given the scope and character of the present day museum, it assumes aesthetic significance in that it enshrines an implied criticism. Museums not only influence taste, but also monitor art and set new trends and style. The most important function is that museum enables dissemination of cultural and stylistic information.

The word, museum comes from a Latin word which means Temple of Muses – a place sacred to Muses. Specifically, museum is the great institution for literary and scientific studies, built and equipped by Ptolemy I of Alexandria which was virtually a University of the Hellenistic World. A museum is also a building or part of one, in wich are preserved exhibited objects of permanent interest in one

or more of the arts and sciences. The collection of art objects and their display are central concern of public museums of India. Museology, which emerged in the mid twentieth Century is the theory and practice of museum construction and arrangement, including architecture, planning and technical installations; and further, enfolds the various problems of acquisitions, methods of display, security and conservation measures, community activities, storage, auxiliary services, training programmes and so on. By virtue of their scientific, cultural and social functions public museums are posed as 'visual art libraries'.

Most public museums in India are, at present, poised to take up the challenges posed in the various sectors of life in the postmodern society, yet hesitating to take a plunge due to various reasons. Rapid technological advances and waning of interest in museum visitors in the wake of growing entertainment industry are two major external factors. At present, the museum movement is marked by the spirit of national pride and an increasing awareness of art among the public. Its growth is in keeping with changes that are witnessed globally in museum movement in the mid-twentieth Century. The present paper titled, The Role of Museum in Showcasing Art History, is an art historian's perception of museological issues in a post modern India.

In India, museums were politico-cultural apparatus of British Imperialism. The first phase of India's museum movement from 1784-1857 was a period of European Enterprise. It witnessed the founding of museums at Kolkata and Chennai[1] – then Madras-and subsequently, The Prince of Wales Museum at Mumbai, then Bombay.

Indian Museum, Kolkata was founded when Asiatic Society accepted the proposal of Dr. Nathaniel Wallich, a Danish Botanist to form a museum with the duplicates of his own personal collection as the nucleus. It received the sanction of law through Museum Act of 1866 as an Imperial Museum. The museum was opened to the public

in 1892. Asiatic Society formulated a scheme of two sections in the proposed museum – one devoted to ethnological and archaelogical artefacts and the other comprising of geological and zoological exhibits. The scope and jurisdiction of the Indian Museum, Kolkata was defined even in its inception. The museum was meant "for the reception of all articles that might be sent to illustrate oriental manners and history, or to elucidate the peculiarities of art of nature in the East[2].

A proposition for a museum in Madras was mooted by the Madras Literary Society in 1846 and Sir Henry Pottinger, then Governor, obtained sanction of the Court of Directors of the East India Company in London. The Government Museum, Chennai-which at the time of its inception was called Central Museum – was installed in 1851, in the campus of the College of Fort St. Geogre. In 1854, the museum was shifted to the present premises. The public Library was established in 1853, the library along with its lecture hall was officially opened by the Governor in a grand ceremony on March 16, 1876. The Prince of Wales Museum was founded at Mumbai in 1905, with the aim of education and was combined with public reading room and library as typified in the older museum at Madras, the many collections of Natural History Society, the Anthropological Society, the Victoria and Albert Museum and the J.J School of Art were housed in the Town Hall. The museum was finally opened to the public in 1922, afier fluctuating windfalls.

The sixteenth Century Western model of encylopaedic museum was emulated in the museums founded in India by the colonisers. The Sixteenth Century West enshrined the renaissance philosophy as witnessed in collection enterprise. In the time of renaissance, "traditional collecting, elite or learned was animated by curiosity, regarding the precious, the rare and marvelous and stimulated by an undifferentiated interest in sciences, in nature and in art[3]". Renaissance thought identified art with science rather than with poety. This viewpoint got affirmation in the sixteenth Century West and

crystallised in the Colonial mind set. The museum display attempted a systematic synthesis of the two worlds – the macrocosm of the animal, vegetable and mineral world and the human world. Hence museum gains in cosmological significance by representing the two spheres of arts and sciences as mirror of the universe.

Both encylopaedic curiosity and ulterior economic concerns of East India Company inform the founding and formulation of the oldest museums of India. The second phase from 1898 to 1928, earmarked as a period of official initiative in the museum movement of India, witnessed a new chapter in the annals of museum movment of the country, under the vice royalty of Lord Curzon and under John Marshall. Lord Curzon was the driving force behind the founding of the Archaeological Survey of India.

Figuratively speaking, museums in India are weathercock of archaeology for two reasons. Firstly museums are repositories of archaelogical finds and stand rich in collection by the same token. Secondly, museums are effected and affected by the swinging fortunes of archaeology at least, indirectly. In 1911, following the Indian Museum Act, the Director General of Archaeological Survey of India had become a trustee of the Indian Museum, Kolkata. Sir John Marshall had assumed office as Director General of Archaelogical Survey of India in 1902.

Marshall recognised the need for close collaboration between Archaeological Survey of India and the museums housing the archaelogical finds as early as 1903 and evinced interest in associating archaeological Superintendents with the administration of the antiquarian sections in the provincial museums of their respective circles. His interest actualised subsequently, between 1906 and 1927. Marshall was responsible for setting up as many as thirty site museums – a Curzonosque dictate-that came under the direct control of the Survey. They were installed in order to keep the small and movable antiquities recovered from the ancient sites in close association with

the remains to which they belong. The site museums at Agra, New Delhi Fort, Lahore Fort, Mandalay and those at the excavated sites of Taxila, Mohenjo-daro, Harappa, Sarnath, Nalanda and Pagan boused art and artefacts of great interest. New museums were installed in rapid succession at Bijapur and Baripada, Chamba and Ajmer, Gwalior and Khajuraho, Sanchi and Dacca.

In general, museum received its patronage from five different sources, namely, government, the Indian States, the learned societies, civic bodies and private individuals. The fortunes ebbed low during the third phase of museum movement called the period of Popular Participation, from 1928-1947. The progressive growth in museums was arrested because of political turmoil and intense freedom struggle. At the global level, the economic depression and the impending threat of World War II in 1939 compounded the situation. However, Mortimer Wheeler's scheme of reorganisation of Archaeological Survery of India gave due attention to the development of museums by way of reinforcement of museum personnel and by the creation of a Museums Branch in 1945. The National Museum, New Delhi owes its existence to Wheeler's initiative.

The period of Popular Participation also witnessed the formation of University Museums; Asutosh Museum of University of Calcutta; Bharat Kala Bhavan of Benares Hindu University to mention two. The resurgent spirit of nationalism among the Indians foiled the efforts. In the fourth phase of period of New Trends from 1947 to 1980, the archaelogical museums-the new *avatars* of earlier site museums acquired prominent position because of pronounced increase in tourism and travel. They included the museums which are situated at or near the ancient sites of the monuments as well as those within temple sites, at palace grounds and within churches and forts. One interesting and relevant point is that over the post Independence period, Archaeological Survery of India came to function as an attacbed office of the Department of Culture, Ministry of Human Resource Development.

In the period of New Trends from 1947 to 1980, the museological aspects gained in focus in keeping with the changes in museum movement at large. Many museums showed preference for a chronological period classification. Varied opinions prevailed regarding the treatment of the background in display. Many favoured the "atmosphere rooms". Some believed the nutral colour would allow for 'contemplation of art in isolation'. The technical aspects like lighting, labeling etc., were becoming increasingly sophisticated prepositions. The museums were expected to interpret art for the public awareness and further enable informed appreciation of art. Museums organised many activities towards fulfilling these requirements. This was the imprint of modern sensibility – the 'modern consciousness' of art history which facilitated the understanding of the art object and its 'immediate background'; in short to reconstruct the past. In this context, museum publications especially catalogues play a significant role.

The functional and aesthetic problems engendered by the arrangement of museum are manifold especially in a large democratic country like India, where unwiedy governmental procedures and elaborate bureaucratic system instituted during the British Imperial regime prevail.

Works of art impact viewers differently in their sites, in the museum galleries or when seen on TV screens through satellite network. In museum gallereis, art viewing is a first hand experience. Seeing the same art objects, for instance in satellite channel or in the web sites is an exciting arm chair experience. However, each one's understanding is through the camera and through other peoples' view points. The cameramen, script writers, editors, commentators, producers etc., are experts working as team to offer the viewers a good deal. Virtual reality is at the doorsteps of museum enterprise with its promise of stupendous viewing at the click of the button.

Technological intervention and public initiative are two crucial factors of consideration in the post modern context. The scenario of visual culture has changed phenomenally, compelling art historians into new mode interrogating history and art. Two major theories of New Historicism and Post Colonialism are helpful in the understanding of the impasse and hold key to possible solutions. A projection into future on the possibilities by which the museum can fulfill its role of message bearer of a national heritage is useful.

New Historicism and Cultural Pluralism which emerged in the early 1980s redefine the boundaries of historical inquiry through which are history became a social science like anthropology and sociology. Friederich Nietzsche and Foucoult alike, refuse to see history as an evolutionary process. According to Foucault no event has a single cause; each event is a web of vast network of economic, social and political factors. The insistence on interdisciplinary connections is evidenced in art history writing and museology.

According to New Historicism it is treacherous to reconstruct the past if only because of the difficulty caused by bias of their own historic vantage point. The art objects have their own history, too, in the museums – in the locations where they have been displaced. For instance, the distribution of the sculptures of the *Mahastupa* at Amaravati on its discovery by Colin Mackenzie in 1797 to the museums at Madras and London, their journey to the present locations and subsequently, the manner in which they are displayed constitute significant new history of the Buddhist monument. Interestingly, a similar fact is evidenced in Rakhaldas Banerjee's historical fiction in Bengali titled "*Pashaner Katha*" (The Tale of a Stone Slab) which narrates the story of a sculpture from Bharhut Stupa now at Indian Museum, Kolkata. The act of displaying an art object, represses their past history by reason of its original context being lost. Demystification of the concept of museum and 'deauratising' art objects housed within are current needs. The works of art need to be displayed in a manner suitable to their origin and place in society.

In this context photographs, diorama projections and the like are helpful. The art exhibits are to be accompanied by prints and photographs related to the exhibit, wherever possible. The Tamil bronzes which are *utsava murtis* (processional images) may be supported by photographs of the image duly robed in grand silks, wearing jewellery and abundantly garlanded; as they are carried along the *sannidi* street. In fact, video presentation of the temple festival as well as the display of related metal vessels, wooden *vahanas* etc., would afford rewarding museum experience.

The history of museum movement in India shows that the colonial script is written heavily on public museums of India; the colonial predicament calls for immediate unraveling. The Orient had cast hypnotic veil on the West; it was seen as a fascinating realm of the exotic, the mystical and the seductive. Post-colonial Criticism which emerged as a distinct critical theory only in 1990s presented a new viewpoint. Edward Said's seminal work, *'Orientalism'*, published in 1978, is a specific expose of the Eurocentric universalism which takes for granted both the superiority of what is European and Western, and the inferiority of what is not. The contrast between the Occident and Orient was seen as unbridgeable, where the Oriental was considered as backward and primitive, and capable of advance only with Western aid. European cultural tradition of Orientalism identifies the East as 'Other' and asociates cruelty, sensuality, decadence, laziness, and so on with it in a stance self claimed superiority.

The beginnings of Postcolonial Criticism may be traced to Frantz Fanton's The Wretched of the Earth published in French in 1961 and burgeoned by such books as In Other Worlds Gayatri Spivak published in 1987; The Empire Writes Back by Bill Ashcroft published in 1989; Nation and Narration by Homi Bhaba published in 1990 and Culture and Imperialism published in 1993 by Edward Said. Broadly speaking, Fanton argued that for centuries, colonising West will have devalued the 'colonised' nation's past, seeing its pre-colonial status as pre-civilised state and even as a historical void. Children and

education will have taught the colonised to see history, culture and progress as beginning with the arrival of Europeans.

Thus the post-colonial writings show mirror to the present India, in order to make aware the 'colonial trap' that India's socio-politico-cultural apparatus is caught in, by reason of being colonised for centuries. It makes the nation look at its past in order to realise the burden of its 'colonised past' which it is unconsciously carrying. The outline of museum history provided in this paper would testify for that. Fanton advocates two steps in the road to recovery. The first step for the colonised in finding a voice and identify is to reclaim their own past; then the second is to begin to erode the colonialist ideology by which that past had been devalued.

Post-colonial criticism foregrounds questions of cultural difference and diversity and examine their treatment. Their perspective allows to view the states of marginality, plurality and perceived 'otherness' as sources of energy and potential change. Post-colonial criticisms help to focus on special issues of gender and class. There fore museums stand to gain. Public museums in India need to reach beyond the 'classical and high art' formulae and enfold folk and tribal expressions of art. Moreover, the every day aesthetics of women's creations like embroidery, floor drawings and room or entrance decoration etc., would find prominent display space in the museums. In a radically different note, the intangible cultural signs of specific life patterns would be contemporary developments in use of new materials. Life patterns and life styling deserve display spaces in museums. They may range from pat paintings to temple related textiles, plastic *kudam* to objects that are mass produced to simulate handicrafts. The representation of toys and decorative items in plastic would throw light on an important chapter in the long history of civilisation. The public museums stand challenged. They are now required to exercise what Said calls as 'critical consciousness' which would allow them to find their own voice across the barriers of bureaucracy, monetary constraints and public apathy.

There is an urgent need to reorient collection to preserve the culture of the past two centuries. India's recent history may be preserved through artefacts and rare photographs of Freedom Struggle, India's role in the two World Wars, Partition hiatus etc. Colour photographs of art which are of temporary nature would consolidate the archives and may be exhibited periodically. It is important to set aside gallery spaces for on going temporary exhibitions, which could display objects of special interest, like metal pots of India, embroideries of the South, temple jewellery, doorframes and panels etc. The selection ought to be carefully made and be representative of various co-existing traditions. For example, embroideries of the South would include convent embroideries, zardosis etc. I place on record here, that such exhibitios are best undertaken by public museums. Accurate information based on extensive research may be provided to visitors in the form of labeling, chart and handouts – all of them designed artistically, yet at low cost.

There is a wealth of information available on the objects on display. Authentic facts regarding the art work, along with comments on the artistic merits may be recorded in Tamil, Hindi, English, French etc., made available for a fee and deposit. Video tapes of short duration on the information surroundig the works with possible simulation of the historical events may be museum activities need to be more in number, innovation and variety shoud be the password of the programmes organised. The activities that are interactive and participative in character would be valued by the public. Mumbai has set a model to follow. Museum Society of Mumbai functions as a suport system to the museum administration in organising exhibitions, lectures, film shows etc. Museum Society of Bombay was founded in 1961, and has grown to considerable strength by the eighties, and is pro active in the promotion of museum consciousness amidst people. It should be mentioned here that a similar endeavour by Government Museum at Chennai to form a Society of Friends of Museum has received cold response; museum authorities have not given up, yet.

Museum is a field of expertise and specialised skills that has become part of national knowledge. On that ground, museum enterprise practiced within the country or by Indians is naturally India. It remains for public museums to negotiate the technological knowledge of the country in order to widen local and foreign spectatorship and make their presence meaningful. The continuously and rapidly advancing world at large challenges the public museums to catapult in to fast mode of operation. Otherwise museum movement would be marching in the same place and let the world passes by.

References

1. Barry, Peter (2002) Beginning Theory – An Introduction to Literary and Cultural Theory, Manchester University Press, Manchester.
2. Baxi, Smitha and Vinod P. Dwivedi (1973) Modern Museum, Abhinav Publications, New Delhi.
3. Bhattacharyya, A.K. Indian Museum, Treasures of Indian Museum, Marg Publications, Bombay, New Delhi.
4. Gopalan, Durga (unpublished), Showcasing Art History – The Amaravati Sculptures, Dissertation submitted for M.Phil, University of Madras, Chennai - 2000 - 02.
5. Roy, Sourindranath(1961) The Story of Indian Archaeology , 1884-1947, Archaelogical Survey of India, New Delhi.
6. Salerno, Luigi and others(1965) Museums and Collections, Encyclopedia of World Art, Vol. X, p. 377-399, McGraw – Hill Book Company, New York.

* *Reader in Fine Arts, Stella Maris College (Autonomous), Chennai - 600 085.*

First Things First

** Prof. C. Panda*

Introduction

His Excellency's unbridled affection, kind concern and confidence in me has given me the unfettered strength to interact to-day with one of the most thought-provoking discourse on human management. I am no management guru, in fact I was not even a student of management studies, or even a trained administrator. And I do not think even fit to pass any test on managing self and others. However, as it happened with all human beings, trained or untrained, with formal education or with no education, I too had to daily interact with my environment, home, work place and the people who directly or indirectly were and are instrumental of my sustenance and survival with honour. And in the process I had to know the art of managing self, and the five decade long experiences had inculcated a sense of urgency, a passion and a fierce quest for secured home, stable friends, trusted colleagues, identity, and the purpose of living. Holding strenuously one's uninterrupted right and access to home, the common space and the work place, as is well-known, demand worthiness from the occupant, and there being no other respectful choice, one has to work hard and hard, one has to remain creative and productive, accountable, transparent, trustworthy, loving, caring and responsive. In the process, even a novice, a learner, has to respond to self and others, he has to think in a rudimentary form what is his future, what are his goals, and how he is going to achieve those goals and how he is proposing to move from one point to another. The vision and the missions are the inevitable and enmeshed credentials of his thought pattern.

Prelude to the Theme and Justification of the Talk

These and some of the felt needs in the course of one's own quest for identity and survival have taken us unconsciously to the doorsteps

of managing the life and work cycles. The desire for a better living, a better life and a better environ further necessitated the quest for knowledge, both elementary and specific. The ever increasing demands of home and work place on our respective time, energy and resources again added additional responsibilities – search for a perspective on managing all the affairs better and to the best satisfaction of others. And the expectation of others compel us to reformulate our ideas on life and work. The title theme, First Things First (FTF), coined by celebrated authors, Stephen Covey, Roger and Rebecca Merrill, address many of these issues in a wider perspective and suggest that effective time management in relation to home and work place are not enough to bring the desired results. No single method, no technique, no tool and information can settle our worries and deliver the satisfaction and happiness we very badly need and we aspire endlessly. Individual and collective success and satisfaction are the end results of a praxis – to live, to love, to learn and to leave a legacy. In fact, the FTF delivers us to a place where we can each make the right choices, fuelled by a powerful vision of a life lived as a legacy- a life of enduring meaning.

In FTF, the individual, is not seen as a Manager, he is seen to be a would be and emerging leader. Individual's strengths and capacity to lead self and others, are attributable to individual values fuelled by the implicit love for the family and work place together with four endowments - self awareness, conscience, creative imagination and independent will. Added to these are strengths acquired by social commitment and spiritual need. Covey & Merrills' individual, it seems, is not an one dimensional man tied down to self needs and to the machine and have no time for exploring the fire and compassion within. Now how this man, representative of all others, individually or collectively, could induce change and act as a catalyst. The authors have made a very convincing presentation by developing a new paradigm whose base stands on principles of mutual benefit and co-operation, respect, humility and authenticity, valuing the difference and search for other alternatives, empowerment, ideals and peace.

The paradigm also addresses the issues of management of work and reviewed the literature on time management, its strengths and weaknesses, and the FTF paradigm. emphasized the facts and extent to which, the limitations imposed by the earlier approaches, have made FTF so convincing and enduring a paradigm to choose and follow. It is, as will be evident, is a code containing metaphors and commanding insights so essential for setting and achieving SMART GOAL as well as setting the journey towards an effective and far reaching changes.

The FTF approach becomes so convincing and enduring for more than one reasons. Take for instance, the way and extent the other approaches to the study of managing life, work and mission became ineffective, e.g., Prioritisation and Identification, Magic Tool, Time Management, Get Organised, Warrior, Goal and Recovery.

Previous Approaches

The contributions collectively made by the eight approaches named earlier are certainly commendable. More so in view of the fact that they touched upon the concepts of order, high independent production, commitment and focus, prioritisation, leverage, skills, harmony and self awareness. But their individual or collective weaknesses are too difficult to ignore. For example, the approaches do not recognise extrinsic realities that govern quality of life, create the illusion that effectiveness is in the skill, create the illusion that power is in the tool. They give illusion of productivity, does not necessarily help people achieve what's independence.

- Breed strong and even arrogant independence
- Often offend people
- Leads to manipulative behaviour
- Create long term ineffectiveness
- Create life imbalance through exclusive focus of time and energy
- Put "do or die" achievement of goals of spontaneous response to rich moments of living

- Priority is often defined by urgency, circumstance, or other people
- Does not recognise extrinsic realities that govern quality of life
- Create the impression that the power is in the tool
- Often turns tools into demanding master instead of helpful servants
- Often focuses on daily prioritisation of the urgent
- Create the illusion that effectiveness is in the skill
- Lack of balance of a more integrated approach
- Provide no unified solution
- Address a narrow slice of concern
- Focus on the past rather than the future

Covey and Merrills, further examined strengths and weaknesses of three other paradigms, named as First Generation, Second Generation and Third Generation.

The strengths, as summed up refer to

- Ability to adopt when something more important arises
- More responsive to people
- Not overscheduled and overstructured
- Less stress
- Track commitments and appointments
- Much more accomplished through goals and planning
- Assumes responsibility for results
- Connects with values
- Translates values into goals and actions
- Increase personal productivity through daily planning and prioritisation
- Increases efficiency
- Gives structures / order to life
- Strengthens skills of managing time and self

But the weaknesses, in a long run, override the strengths and demonstrate the following :

- No real structure

- Commitments to others either ignored or forgotten, relationships therefore suffer
- More from crisis to crisis
- Little to putting schedule over people
- More of what you want – not what you need or what is fulfilling
- Independent thinking and action – sees people as means or barriers to goals
- Can lead you to believe you are in control, rather than natural laws or principles
- Values not necessarily aligned with principles that govern
- Power of vision untapped
- Daily planning rarely gets past prioritising the urgent, the pressing and crises management
- Can lead to guilt, over programming and imbalance between roles
- Less flexibility / spontanity
- Skills alone don't produce effectiveness and leadership
    - Needs character
    - It makes managers not leaders
    - Embraces only passion not compassion
      Balances life and work are illusions
    - "First things" – right in front at you, or in the Schedule and they are set by urgency, and values and don't lead behind a legacy. Does not deliver, though it gives the promise of achievement, a sense of hope.

It is therefore argued and emphasised that if we want to create significant change in the results, we can not just change attitudes and behaviours, methods or techniques. We have to change the basic paradigms of which we grow. When we change the behaviour or method without changing the paradigm, the paradigm eventually overpowers the change.

The time management was thought to be the guiding force behind developing the mission and goal-setting. But it is often seen that cannons of quality of life are just as likely to come from someone with a high level of time management training as from someone without it.

First Things First

Covey and Merrill's paradigm, PTF, while admitting and accommodating all the strengths of earlier approaches, maintains a respectful distance and moves beyond. It is not different by degree but in kind – a fundamental break with less effective ways of thinking and doing. It is more than an evolution, it moves towards revolution. Its focus is not on time and change but it emphasises relationships and results. It moves beyond time management to life leadership and strives for quality of life results. It upholds the view that meaningful life is not a matter of speed or efficiency but what you do and why you do it, how fast you get it done, and the perspectives of doing it. It sharply distinguishes between important and urgent, important but non-urgent and non-important-non-urgent matters. It emphasises that the four needs (spiritual, mental, physical and social) are real and deep and interrelated and not compartmentalised. Their cohesion produces balance, deep fulfillment and joy. The integration produces an explosion of inner synergy that ignites the fire within that gives vision, passion, a spirit of rational adventure of life. It guides us to think and embrace the thinking that quality of life is not 'me', it is 'us' – we live for others. The effort has to be based on practical realities that produces the results. Only then we can dream, set goals, and work to achieve them with confidence. Turn weeks, months and years into upward spiral of learning and living. Strive for shared vision, agreements and empowerment. Move towards compassion, tolerance, harmony, rhythms, self-awareness and peace. Peace means functions of our deep inner life. FTF, therefore, should not be considered as a tool, it is a way of thinking.

Message and Wisdom Received and Praxis

The FTF, therefore, assumes responsibility for results, it produces less stress, it translates values into goals and actions. It brings order to life and work, provides ability to adopt, makes us more responsive to people, and accountable. It inculcates the integrity and trust. Its inherent message is your perspective and purpose is best served if you strive to create or leave behind a legacy.

Approaching Victoria Momorial through the Prism of FTF Paradigm

How and to what extent the nuances of FTF paradigm have percolated down my memory lane and influenced my visioning, ways of thinking, mode of behaviour and capacity to initiate change within VM. I am not too sure about its quantam. Even if I do, it is certainly be considered a classic case of hyperbola. We may judge ourselves by what we feel capable of doing, while others judge us by what we have already done, and have been doing.

My role as VM's Curator is an envisioning process and a leaning process as well. With teaching, I found no challenge, no satisfaction, no new goal setting and no legacy to leave behind. The Hall, on the other hand, gave me a challenging responsibility, a tougher agenda, a new goal-setting process. I am performing my role in VM as head of the institution. In the vocabulary of Finance Ministry we are field officers, although I /we are entrusted with the additional duty of implementing the policy decisions, handling crisis within the institution and projecting the institution through self before the public.

The definition and importance of museum are changing over time as medium of popular awareness and education. Here one may ask the question, can me stick to our role as a simple policy implementer with a stereotype? Are we only managers? Here comes the challenge. VM is a 80 years old institution which has undergone hardly any fundamental changes since past decades. Moreover the changes should of course be precipitated by an in depth assessment of the specific role of the institution vis-à-vis the society and people.

The process of rethinking has started thanks to the initiative of His Excellency. By virtue of the FTF principles, I find it difficult to consider me as a middle level officer, instead, my job is much more than that of a mere field officer endowed with certain executive and financial responsibility. Indeed, I am not a policy formulator, but I have the responsibility of being the implementor. Here I perceive my chance to leave a legacy fortunately. Because, the meaning and implication of a specific policy certainly takes a shape and dimension through the implementor. No need saying, the implementor always confronts with limitations and constraints from various levels. I find FTF approach therefore is most appropriate to implement the changes/visionary goals within VM. I learn to differentiate between urgent and important, between urgent and unimportant and so on so forth. I felt the fire within, the intrinsic value of working with others, enriching and empowering and discovering self in the process. The agonies die down, the ecstacy emerges. If you look at any role; big or small, you perform, you perform it better for your community, family, friends and for self satisfaction and perform it better and better.

Conclusion

It is therefore the will power and the mission that makes an individual definitive about having a purpose and will power is the out growth and manifestation of persistent action based on personally initiative and collaboration. Coming together is a beginning, keeping together is progress and working together is success. And I unfold this capsule of First Things First (FTF) paradigm by quoting the greatest man of last century:

"A man of character will make himself worthy of any position he is given".

* *Secretary and Curator, Victoria Memorial Hall, Kolkata.*

DISPLAY

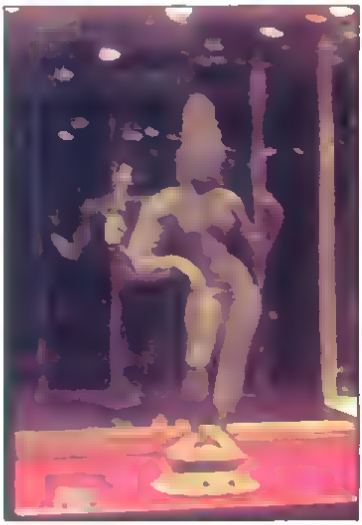
Diorama, National Museum of Natural History, New Delhi

The Great Sphinx at the Giza with Pyramid, Indian Museum, Kolkata

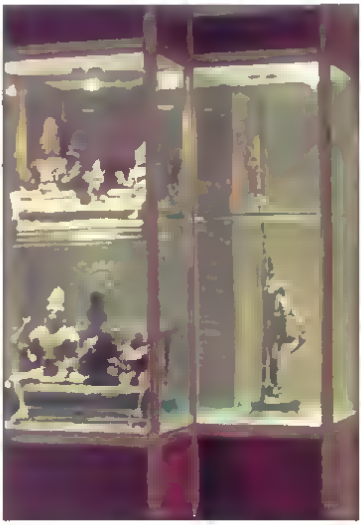
Dietician s Desk

Virtual Reality

Touch Screen, Government Museum, Chennai

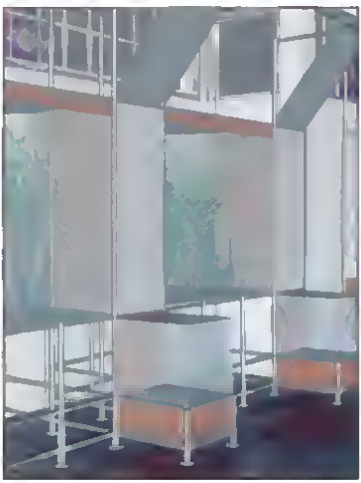


Revolving Disc with
Ardhanariswara



Multi-level Display
of Bronzes

Virtual View of the Bronze Gallery



Virtual View of the Contemporary Art Gallery

Government Museum Chennai

Present Trends in Museum Display

* *J.R. Asokan*

Introduction

When one surveys the history of computer development, one can see the development stages as first generation computers, second generation computers, third generation computers and so on. Similarly, when we see the development of museums from past to the present, we can see different stages. In the first stage 'rare' objects were collected by kings, noble persons etc., out of their personal interest and the collections were enjoyed by them alone. In the second stage, the collections were allowed to be seen by his close relatives and aids, in the third stage, the public also were allowed to see those collections. Until then, importance was given to objects only. The objects were enjoyed by the visitors at their antique look and beauty. In the next stage importance was given to subject (information) and the objects were interpreted to get information out of them. Thus museums, which were functioning as object oriented institutions are now functioning as subject orienred ones.

The concept of museum has changed from mere a treasure house to educational centres. All the above noticeable changes are possible due to the development in display techniques in museums.

What is Display?

Display is nothing but presentation of an object so that it can speak to the visitors. It is a communication technique. There are different methods of communication technique or display technique. Different exhibition techniques have been adapted in museums and some of them are given below:

Simple Display

When the objects are displayed without much supporting materials (for information), the display is called as simple display. E.g. Display of sculptures in many museums. Usually sculptures are exhibited with a single label consisting the name of the object, place from where it was collected, period of the sculpture etc. Usually they do not give any other information. This is called as simple display.

Suggestive Display

When the objects are displayed with more supporting materials, then the display is called as suggestive display. In this, objects are displayed with colour charts or photographs, explaining the object from where it was collected or the location of the object or any other comparative account.

Dioramic Display

When the objects are displayed with its natural background or the objects are displayed in an environment simulating its natural environment, then it is called dioramic display.

Semi - dioramic Display

Instead of creating a perfect background of the environment of the objects, the objects are supported by relief work, which is called a semi dioramac display.

Walk - through Diorama

Instead of creating the diorama in a showcase, the entire hall of a gallery is converted in to a diorama and the visitors are allowed to walk through the diorama, this is called walk through diorama. Eg. The Rock and Cave Art Gallery in the Government Museum, Chennai.

Working Models

Working models are exhibits which are mainly found in science museums. Here the exhibits are arranged in such a way that the

visitors get the opportunity to touch and feel the exhibits. These exhibits can be working models. This type of exhibits are much attracted by visitors.

Computer Aided Display

Computer application is necessary for the present day museums. Many themes are loaded in the computers and by operating the database the visitors get the opportunity to know about the subject.

Types of Museums

There are different types of museums depending upon their specialisation. Viz.

Art Museums,
Archaeological Museums,
Anthropological Museums,
Natural History Museums,
Science and Technology Museums,
Multipurpose Museums,
Rail Museums,
Air Force Museums.

All these museums adopt different types of display technique for attracting the visitors.

Display or exhibition of materials may be classified in to three categories.

Aesthetic Display
Educative Display
Tourist Attractive Display

Aesthetic Display

Exhibits like sculptures, bronzes, paintings, and woodcarvings etc., come under this category. Aesthetic display makes to appreciate art objects. We do not get much information from this type of display but we can appreciate the beauty of art objects. Mostly Art and

Archaeology Museums exhibit objects like this. Only those persons who are interested and specialised in this subject appreciate this type of display work.

Educative Display

If the objects are displayed with supporting materials and good interpretation the display is called educatative display. This type of display gives much information to the public. Art and archaeology museums can also attract general public, if the display is educative one.

Tourist Attractive Display

In this type of display, the object forms important due to its size, special character etc. Eg. skeleton of whale or dinosaur etc. Most of the public get attracted by this. Even if these exhibits do not provide adequate information they will attract public. Museum display has to be changed to give more information to the public so that they may be more educated.

Present Trends in Museum Display

Currently museum display concentrates mainly on education. Education is nothing but mental absorption of knowledge (Knowledge for the Human Development). Present day museums adopt different methods in educating the public. Education through entertainment is followed in many museums, especially in science museums. Animated models, participatory exhibits, I.T. based programmes etc., induce education. Present trend in museum display in some major Indian museusms has been cited. Even though normal gallenes are functioning already in these museums, new galleries adopt different display methods to attract visitors, the sole aim being to educate the public. As an example, one or two galleries have been cited in these museums.

National Museum, New Delhi

Usually, archaeological museums adopt 'simple display' technique. Much information is not given about the objects but objects are

valued from their aesthetic beauty. Dioramic type of display is mainly confined to science museums. But there is a change in the trend and now even archaeological museums have started introducing dioramic display. In the National Museum, New Delhi we can see diorama show cases in the Maritime Gallery and in the newly organised Numismatic Gallery. The introduction of computer-aided display can be seen as Plasma Screen, Touch Screen and the modern labelling methods (Bold labelling and computer printed foam boards) and concept-designed visual pictures in the Harappan Gallery which exhibit the recent trend in the display methods.

National Museum of Natural History, New Delhi (NMNH)
Science museums are more familiar with animated and participatory exhibits. A lot of working models (Eg., Evolution of life, Photosynthesis) and self-explanatory exhibits are more familiar with these museums. Dioramic type of display, even though started long ago, is still successful as a good interpretation technique. The National Museum of Natural History, New Delhi has increased the size of the dioramas vertically so that the visitor gets an excellent view of the environment in which the objects on display are located in a natural environment.

Computer aided display is the recent trend of all museums. Natural history museums also have started using computer for display purposes. The latest galley of NMNH, New Delhi has used computer applications in the "Cell, the Basic Unit of Life Gallery" for getting information about each component of cell in detail.

Indian Museum, Kolkata
The Egyptian Gallery in the Indian Museum, Kolkata is highly informative that a lot of information has been given about Egyptian culture that too in an attractive manner. This gallery clearly differs from other galleries in the presentation technique. Like that the Pre-history Gallery is also informative with a lot of mini-dioramas and information charts.

In the geological galleries we can see a noticeable difference between old display method sloping cases and new IT based display techniques employed. The newly opened General Geology Gallery has used computer printed attractive colour charts. The labels are bold so that visitors are able to read from a distance.

Birla Industrial and Technological Museum, Kolkata

Like any other science museums, the Birla Industrial and Technological Museum, Kolkata has a lot of mechanised and participatory exhibits. But the noticeable difference in the display is that the newly opened "Life Science Gallery" surprises the natural history museologist. Live animals, different types of working models with computer applications have been used in this gallery. Participatory exhibits with the help of computers make this gallery more dynamic. Unlike other science museums we can't see the 'push button culture'. As an example we can say that in the "Dietician's Desk"? one has to select the food items he or she takes daily (during breakfast, lunch and dinner). The machine gives a lot of choice. Actual food selection can be done in this. At the end, the machine says how much calories you get daily and whether you are over weight or underweight. It also advises what type of food you have to take daily for the correct maintenance of your body.

Another interesting present trend in display is giant size animated working models. The very big (life size) Tyrannosaurus model moves its head up and down, sidewise, shakes its body and make crumbling noise. All these movements attract the visiting public. Even we can include an audio commentary before this programme for conveying the knowledge about these animals.

Science City, Kolkata

The Science City, Kolkata is advanced in the presentation technique of 'Space Theatre' and 'Time Machine'. In the Space Theatre when the projection is made on a 180^0 curved screen with special cameras the entire environment in the screen engulfs the audience and we get

Head on a Plate Fun in a Science Gallery

a realistic walk through. Like this, in the time machine where the audiences are asked to sit in a space ship like compartment and with the motion picture along with the synchronised jerks and sound created by the machine makes the visitor to feel the virtual reality of the space journy.

Government Museum, Chennai

The Government Museum, Chennai has recently introduced many modern techniques in its galleries due to the interest shown by the Commissioner of Museums. Modern octanorm show cases have been introduced to attract the visitors in the Bronze, Industrial Art and Foreign Animals Galleries. Modern lighting fixtures like dichroic halogen lamps, Fibre Optic Lights have been introduced to give beautiful effect to the display. Labelling methods have also been changed. Computer printed vinyl sheets pasted on foam boards have been used in modernised galleries. In the Holographic Gallery, (the first of its kind in India) three-dimensional presentations of the objects are done without the original coins, jewelleries, bronze icons etc.,

Coins Gallery Fibreglass Models on Display

Changes in Display Pattern

Presently the following changes are generally noticed in display.

Change from Objects to Models

Present day museums especially natural history museums,

require less number of original specimens for display purposes. Original objects have been replaced by the introduction of models, paintings, cutouts, computer-aided display etc. Another reason is the restriction in flora and fauna collection due to the strict enforcement of Wildlife Act etc.

Change in Showcase Pattern

Now ultra modern show cases are prepared to attract the visitors. The noticeable change in show case is from wood to metal and also less framework. All glass with less frame work is well attracting.

Changes in Lighting

The conventional fluorescent lamps and comptalux lamps have been replaced by halogen lamps. Even, fibre optic lighting is used by leading museums. The advantages of fibre optic lighting are less space requirement, void of heat and ultra violet radiation. Heat and ultra violet light are harmful to organic objects.

Labelling Technique

Labelling technique has been changed from computer printed-paper label to computer printing on vinyl sheets, which are pasted on to the foam boards.

Display Technique

More self explanatory (suggestive display or diorama) or animated or participatory exhibits are used in many museums. Especially this type of display is more frequently used in science museums.

Even audio-visual display, synchronisation of light and sound programme are more frequently used in many museums. Developed countries use this type of display quite commonly in their museums. For example the American Museum of Natural History, Newyork conducted an exhibition called 'Can Man Survive'? In this visitors were taken from a spacious calm ecosystem to congested, garbage spattered, polluted environment with light and sound effect where the visitors

noticed the long time change in the environment, in short time. All this effect has been created in the museum itself in its galleries.

I.T. Based Display

The introduction of computers, Websites, Touch Screen Kiosks bave considerably changed the display pattern. Communication technique is well advanced that we need not stick on to one museum alone. Some museums like Government Museum, Chennai has very elaborate Website and anyone can see the interesting collections through Internet. Thus all the above-mentioned points show that the museum moves from object orientation to subject orientation or information orientation. In this aspect we can see what will bappen in future? Tbe development of Virtual Reality will convert our museums into Single Room Museums, where from one place, any one can see any type of collection or monument and the visitors can experience 3D travel in the monument or seeing the exhibits as if it were real. But all these tbings will depend upon the programming in the computer. Now itself, Natural History Museum, London and other leading museums in the world are doing research in opening the virtual reality galleries in their museums. Hence museums are no longer stick with the original objects for conveying the knowledge to the public.

References

1. Bedekar, V.H. (1978) "So You Want Good Museum Exhibition", Baroda.
2. Bedekar, V.H. (1994) Exhibition Strategy for Comtemporary Museum, Bulletin of the Government Museum, Madras, New Series, General Section, Vol.XV-2.
3. Biswas, T.K. (1996) Museum and Education.
4. Journal of Indian Museums, 2001.
5. Journal of Indian Museums, 2002.

** Curator for Design and Display, Government Museum, Chennai - 600 008.*

Exhibition as a Medium of Communication-Present Trends

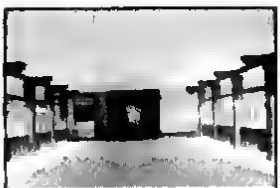
* *R. Balasubramanian*

Dictionary defines 'Exhibition' as 'a showing' and in this sense the entire world is an exhibition of one sort or another. However, in the context of our discussions, 'exhibition' should be defined as 'showing for a purpose'. The purpose being to affect the viewer or visitor in some predetermined way. The possibilities afforded by exhibition, as a medium of communication are boundless, limited only by imagination, practical skills, physical possibilities and of course the budget allocation.

Undoubtedly exhibition, as a medium has certain advantages and certain limitations and disadvantages too.

The most important characterisation feature of a museum exhibition is that it facilitates an encounter between viewer and three-dimentional object. Other media, such as television or a printed book can portray images, but they are not the prime source. Only exhibition of original objects provides a direct impact on viewers as it helps him or her to have contact with real, authentic object, and this is what makes the museum exhibitions so vitally important.

Furthermore, the exhibition is not limited to the size of a television screen or page. It can work at scales appropriate to those of the objects to be shown and facilitate a bridging function so essential to making viewing comfortable on a human scale. Small objects can be given some prominence and positioned in a way that enables them to view, and larger objects distanced or brought close to heighten visual interest as needs dictate. Bringing the object and viewer close together is the main function of museum exhibitions, and this medium can achieve this in a manner, which is safe for both the object (in terms of security and conservation) and viewer.



Recreated Vaishnava Temple Atmosphere in the Bronze Gallery

By providing a multi faceted approach, exhibitions can function simultaneously at different levels in many different ways. In this manner a range of aims and objectives can be achieved in a single exhibition by the use of a variety of interpretive materials, and the exhibition can appeal to a wider viewer group made up of different ages, levels of knowledge and intellects. Irrespective of audiences for whom the exhibitions are mainly intended, they are essentially spaces within which visitors can move and progress freely. This has the advantage of enabling them to proceed at their own pace, and of allowing them to linger on that which interests them and bypass that, which does not. Thus the main and important advantage of museum exhibition is – for the visitor it can provide a very exciting multi-sensory experience with the opportunity of a first band, encounter with real objects and the resultant pleasure, entertainment, satisfaction and acquisition of knowledge.

Limiting Factors Related to Exhibitions

Good exhibitions do not come easily, nor do they generally come cheap. The production process of a major exhibition is normally complex, extensive and resource-intensive on specialist's time and skill. In addition to budget, space and time are two other pre-requisites. An exhibition needs to be in place and open for sufficient time to enable it to be seen by worthwhile number of visitors.

Exhibitions, by their very nature and by the way in which people are obliged to experience them have a tiring effect on visitors and generally the larger the exhibition the more exhausted the visitor becomes. Curators need to be aware of this factor and may have to take as many steps as possible to minimise visitor fatigue and also encourage visitors to return. Apart from these, Curators should take every

reasonable precaution to ensure the safety of the objects in their charge. And this will need to be done at every stage of an exhibition's life – preparation, curation, and maintenance. However, the Curators and others who are responsible for an exhibition must be aware of these disadvantages, when alone it will help to minimise the adverse effects.

Recently, the Bronze Gallery in the Government Museum, Chennai has been reorganised using the advanced display techniques to enhance the viewer's pleasure. All the galleries and facilities have been designed using Computer Aided Design. A Virtual Gallery was created and then the actual gallery was created in physical space reality. By this method we have made hi-tech showcases.

Multi-level Display

Multi-level display is a feature of the aluminium profile framed showcases. Toughened glass on all sides and display on glass bases with lighting from below the base gives a feeling of floating in the air. Bronze tinted glass mirrors at the back show the rear side of the bronzes displayed, so that the viewer could enjoy the beauty in full.

Dynamic Display

A scroller display is being installed which will display select important bronzes. The Ardhanarisvara bronze is shown on a revolving disc within a show case that will rotate all the 360° at a slow pace.

Exhibition as an Art Form

Exhibitions are conceived as a sculpture. They are three-dimensional composition, which recognise the importance of solids and voids and strive for satisfactory spatial relationships. It is sculpture which people are encouraged not only to look at but also to walk in and explore. Some art is visual; some is tactile; some may be heard. An

exhibition can combine all these. It utilises not just form and space but shape, colour, light and texture as well, and may be even sound – and indeed, all the basic elements of art and design. It may also utilise imagery and semiotics. Two other important additional elements are required. First there must be an intention of the part of the Curator to produce something more than that, which will just do its job; second, there must be originality of thought and creativity to produce something, which is quite exceptional, for the mundane and the ordinary, do not qualify as works of art.

References

1. Gardner J. and Heller, C. (1960) Exhibition and Display, Batsford Publications, London.
2. Read, H. (1931) The Meaning of Art, Faber and Faber, Harmondsworth, London.
3. Velarde, G. (1988) Designing Exhibitions, Design Counsel, London.
4. Belcher, Michael (1991) Exhibition in Museums, Leicester University Press, Leicester, London.

* *Curator for Archaeology, Government Museum, Chennai - 600 008.*

Modernisation of Galleries with Special Reference to Museums in Tamilnadu

** J. Christy Veda*

Introduction

Museums, which were repositories of rare things, have become edutainment centres. When there are many Disney lands to attract children and adults like, museums have to adapt hi-tech to bring crowd to sustain their activities. Every museum has to have repeated visit. Unless changes are made, a museum may not be able to attract visitors to have repeated visit. Therefore, it becomes essential to change the objects, mode of presentation, lighting etc. This paper deals with the modernisation of galleries with special reference to museums in Tamilnadu.

Museums in Tamilnadu

Tamilnadu is one of the States, which has developed so well in organising museums. There are over one hundred and sixty museums, galleries, memorials etc., in Tamilnadu. Government of India, Government of Tamilnadu, trusts, temples, churches or private individuals, administratively control them. They are different kinds such as archaeological museums, multipurpose museums, science and technology museums, anthropological museums, specialised museums, educational museums, personalia museums, leather museums etc. Department of Museums, Department of Archaeology, Department of Tourism, Department of Information and Technology etc., have got role in the establishment of museums in the State. Among the 24 districts in the State of Tamilnadu, there are few districts, which do not have any museum at all. The display in some of the museums are not at all proper and there is a need for the refurbishment of the galleries.

Modernisation of Museums/Galleries

Any museum has to take up refurbishment in a way or other. The Museum's Journal of the Government Museum has a separate division, which pinpoints the refurbishment of the galleries in the museums in both Chennai and districts. Modernisation of a gallery/ museum is a task by itself comprising a team work.

Planning

If any work is planned well the work will be successful. One should study the pros and cons of any programme of work. Various aspects of modernisation should be taken into consideration. It is always better to undertake Visitors Survey before modernisation is planned. The visitor evaluation will give an insight into the Curator/ museum authorities the direction on which the modernisation should be taken. The areas in which objects to be chosen, display pattern, present trends elsewhere in the globe, the availability of suitable materials, availability of suitable technology, its workability in Indian situation, sustainability are to be taken care off.

Budgeting

Without financial availability, it is very difficult to take up the modernisation. Unless one knows the present trends in costing, availability of materials, procurability, time required, availability of experts, it would be a mockery. Therefore, estimating the expenditure and allocation of funds under various heads are essential. If it is a private organisation, it should find the financing agency and the money should be available. In case of Government agencies the plan should be got approved by the Government. Once the budgeting is ready, then the follow up work has to be taken subsequently. The Government Museum, Chennai has got special funds from the Government of India through the State Government during the 150th year celebrations.

Entrusting the Work

Sometimes it would be better to seek the best plan from designers,

if the museum does not have proper designers of its own. The best designer may be chosen and the tender may be called for from various suitable agencies that have sufficient knowledge in the particular job. The company's credibility also should be ascertained well. After getting the tenders from various agencies, the best agency may be selected and work may be entrusted.

Executing the Modernisation Work

Once the modernization work is entrusted to an agency the work is not over. The public should be informed of the work as the gallery will not be available for seeing. The Curator or the person concerned has to supervise at every stage whether the work is carried out as per the specifications laid upon.

The current policy is to test whether the materials used in the showcases are emitting any gaseous products, which could affect the objects. The ambient environment should be checked before the object is presented. The light used should not be producing heat, ultraviolet rays etc., which are injurious to the objects. As far as archaeological objects are concerned, most of them are inorganic and therefore not much fear out of light. But, when the objects are kept inside the show cases, the temperature should not be increased; the showcase's glass may break. The labelling is yet another work to be concentrated by the Curator. Too much script is not required. If any body is much interested in the subject, one should be able to get a brochure/handout or a guide book from the publication counter. It is found of late that whenever a gallery is refurbished a guidebook is being brought out by the Curator or authorities concerned. The Chennai Government Museum refurbished the Bronze Gallery, Numismatic Gallery and the Conservation Gallery in June 2003. It is learnt that the show case designs were obtained from various agencies and they were scrutinised by a committee before their selection. In setting up the galleries, tenders were obtained from experienced concerns in the field. These galleries have brought out

manuals such as Manual to the Bronze Gallery and Numismatic Gallery by Dr. R. Kannan and the Manual for the Conservation Gallery by Dr. V. Jeyaraj, Curator for Chemical Conservation and Research Laboratory.

The Museum at Gangatkondacholapuram, under the control of the Department of Archaeology, Government Museum, Madurai and Government Museum, Chennai under the control of the Department of Museums have set up modernised showcases with three cabinets-top portion for lighting arrangement and exhaust, middle portion to display the object and the bottom portion to keep dehydrants to absorb moisture. Mostly these cases are used for bronze objects.

Opening the Galleries for Public

Whenever any refurbished gallery/museum is closed to the public it should be intimated to the public. The Archaeological Museum in Dahlum, Berlin, Germany kept closed for two years for the refurbishment of its galleries. The Government Museum, Chennai closed the Bronze Gallery for over six months for its refurbishment. When a gallery/museum is to reopen, it is always better to arrange a formal meeting of the press. If evaluation is obtained from public before opening, the defects may be rectified before reopen to the public. Not many Indian museums are evaluating their display. The refurbished galleries in the Government Museum, Chennai were dedicated to the nation by His Excellency, Dr. A. P. J. Abdul Kalam, President of India on the 19th June 2003 in the presence of the Governor and Chief Minister, Government of Tamil Nadu. A press meet was organised before the dedication.

Display of Stone Sculpture in Raipur Museum

Evaluation of the Galleries

The general look of the Bronze Gallery is very good. The Bronze Gallery has got a new look like a jewellery shop with too much lighting. It is being appreciated by many when some criticise the gallery. Anyhow, the look attracts many with the air-conditioned hall. The Bronze Gallery in the Government Museum, Chennai has got new show cases in three categories. Metal and glass are used in the new type of show cases in the ground floor of the gallery. Even though the aluminium metal frames are vapour cured and the glass panes are toughened, there is no provision for the removal of dust from the showcase. The ropes tied to avoid vandalism and any mishap by the visiting public has usurped the visitors having a look at the rear side of the show cases along the wall sides.

The Conservation Gallery has got digital printed foam panels with descriptions along with original objects. The lighting is from the central ceiling at a suitable level so that the objects are visible. At some points the lighting from the top is not sufficient. Anyhow it attracts both students and adults.

Even though the Numismatic Gallery has got some new method of display of its numismatic information such as enlarged fibre glass model of coins and medals and display of coins in such a way that both sides of the coins can be seen, it has not attracted much of the public as the hall is found to be sultry.

The publicity to these galleries was very good and many of the visiting public appreciate. The landscaping is yet another publicity for the refurbished galleries without any write up or words.

Even though the newly organised Holographic Gallery and Rock and Cave Art Galleries are provided with hi-tech display devices, they have not attracted much visitors. Staff motivation is one of the essential aspects in a museum. This has been done by the Government Museum, Chennai by organising courses to cope up with the high tech arrangements of the modernised showcases.

Conclusion

A good budget has to be provided for modernisation. The modernisation of the galleries in the museums in Tamil Nadu has taken a good amount of money. The refurbished display has got a new look and earned the appreciation from the public. If all the galleries in our museums are modernised, we shall get the best name globally. The Government Museum, Chennai has been brought closer to the whole world through its website. Government of Tamil Nadu has shown a way of new presentation of the museum objects through the team work of the department of museums.

References

1. Jeyaraj, V. (2003) Manual for the Conservation Gallery, Published by the Commissioner of Museums, Government Museum, Chennai.
2. *Journal of Indian Museums*, Museum Association of India, Vol. LV, February 2002.
3. Kannan, R. (2003) Manual to the Bronze Gallery, Published by the Commissioner of Museum, Government Museum, Chennai.
4. Kannan, R. (2003) Manual to the Holographic Gallery, Published by the Commissioner of Museum, Government Museum, Chennai.
5. Kannan, R. (2003) Manual to the Industrial Art Gallery, Published by the Commissioner of Museum, Government Museum, Chennai.
6. Kannan, R. (2003) Manual to the Numismatic Gallery, Published by the Commissioner of Museum, Government Museum, Chennai.
8. Museum's Journal (1996-2003) Goverment Museum, Chennai
7. Thompson, M.A. et al (Ed.) (1984) Manual of Curatorship, Museum Association, Butterworths, London.

* *Research Scholar, Department of Ancient History and Archaeology, University of Madras, Chennai - 600 005.*

Art Object – New Ways of Seeing

** Durga Rajagopalan*

India is a country with a rich and varied heritage. Beginning with cradling the vestiges of early civilisations to playing host to the artistic endeavours of the civilised society, India is a land of great wealth. Eminent art historian, Partha Mitter, in his book on Indian Art eloquently captures India's pluralism with a quote from The Bible – 'In my father's house are many mansions'. As a womb house that nurtured the founding and growth of important religions like Hinduism, Buddhism and Sikhism, India was an amalgamation of heterogeneous strands that blended into a single entity. Much of what we know of India's rich past is through archaeological and literary evidences. Archaeological remains help us to establish a link with the past and understand the land we live in and also help to perceive the great strides that India made in art and culture.

Museum as a Provider

Although created in the past, an art work continues to exist in the present, long surviving its times. The heritage of a nation is constituted by its art as they are creations that preserve the thought-forms of bygone ages, with all the vitality and consciousness that brought them into existence. A nation's heritage encapsulates not only the psyche of its people but also acts as a stimulant that gives people a sense of pride thereby deepening an understanding of themselves and promoting a feeling of 'belonging' to the nation not in part but as a whole. One of the tools that aid to construe the past to the general public is the museum. Museums are public places where objects, images and memories are kept and shared. They exist in infinite variety and contradiction, and are anything that the political climate and the imagination allows them to be.

In today's world of international rifts and global terrorism, museums may widely be regarded as an apparatus for peace giving. People

hope where all else has failed and encouraging amity and pride in the cultural and artistic wealth of a nation. Throughout the world, museums are now a major concern. Museums have to establish identities and attract visitors. Natural, cultural and artistic history are protected, conserved, managed and interpreted by families, cities, nations, States and at an international level. This major movement has resulted in the development of museums as a field of study, both on its own, and as a notable part of many other disciplines, such as geography, art history, archaeology, ecology and tourism management. On an international level, museums are seen as a demand led activity, with interested stakeholders being academics, governments, owners, school children, pilgrims and the media as well as the ubiquitous tourists.

Art History and Museums

Aimed as an art history paper with museolgoical leanings, the exposition seeks to elaborate on new ways of seeing a work of art from a post-modern mindset. The intent of this paper is to proffer that in today's world to understand a work of art, it is not enough to perceive just its artistic history. Rather, a work of art is dictated by the context from which it emerges. This context comprises of socio-political and ethnographic background. The critical theory of New Historicism is the methodological tool. Taking the famed Amaravati sculptures as the focal point of the study, the paper looks at the history of how archaeologists, antiquarians and society at large have organised the remains from the past in relation to its site and surroundings.

Modern Criticism

New historicism and cultural materialism emerged in the early 1980s as prominent literary theories and came to represent a revival of interest in history and in historicising literature. Their proponents rejected both formalist criticism and earlier attempts to read literature in its historical context and defined new ways of thinking about literature in relation to history. New historicist methodology defines

the discipline of art history more broadly than its predecessors. It views art history as a social science like anthropology and sociology, whereas older historicists tended to view history as the art objects, immediate "background". New Historicism and Cultural Materialism have become two of the most powerful and appealing movements in modern criticism.

Conclusion

The paper has tried to substantiate the importance of the remains of the Amaravati Stupa in different parts of the world, as it will enable the world community to understand and appreciate the richness of ancient Indian culture and artistic tradition. The Amaravati sculptures play an important role in drawing people to Indian art in general and assist in crossing boundaries into a world that often seems inaccessible and difficult to understand.

* *Lecturer, Department of Fine Arts, Stella Maris College, Chennai - 600 085.*

Present Trends in Museology in Recreating of Cultural Contexts to the Ethnographic Exhibits

** Dr. C. Maheswaran*

Introduction

The ethnographic materials tend to lose their significance when they get uprooted from their respective cultural contexts. For instance, the masks-multivocal symbols of the primitive world – as a category of ethnographic exhibits become silent the moment they got alienated from their contextual use. That is to say, the masks – however ornate they might appear on the walls and or on the museum shelves-lose their innate significance when divorced from their functional use. In other words, the masks remain incomplete so long as the performer has not construed movement associated with them. Gestures of the masked spirit and accompanied performers enhance their meaning further. And this is one reason why the masks in isolation and away from their cultural contexts-which could provide both the contextual use and functional use to them – seem to cease communicating (i.e. mute) and look very ordinary (i.e. Insignificant). And hence, it becomes inevitable for the curatorial staff to exercise their entire stock of museum techniques painstakingly to bring forth the original cultural contexts, at least artificially[1]. Adoption of various 'presentation techniques' (popularly known as 'exhibition techniques')[2] enables the curatorial staff to recreate the cultural contexts to these uprooted ethnographic materials.

This paper tries to present a survey of present trends that are prevailing in museology in recreating of cultural contexts to the ethnographic exhibits.

Ethnographic Exhibits - Their Nature and Significance

While presented to public viewing, the ethnographic materials acquire the elevated status of ethnographic exhibits from their early status of being mere 'ethnographic objects'. The ethnographic exhibits, which are the creativioes of ethnic groups, vary in form from the crudest to the finest. And they form the media of interaction of any particular kind of phenomenon, technology, environment, in short, the art and the culture of any tribal, folk or urban community. Thus, they inturn form the media of interaction of visual communication by keeping a link with the viewers.

The ethnographic exhibits possess manifold values such as functional, aesthetic, cultural etc., and therefore their presentation must not allow any of these values to suffer for another[3]. Some ethnographic exhibits may catch the attention of the visiting public for a moment or two but by and large the entire ethnographic exhibits that are on presentsoon could not hold the attention of the general public for a longer duration, as the people in general are guided more by their sense of curiosity than by any other proper objective.

Need and Significance of Recreating of Cultural Contexts to Ethnographic Exhibits

In presenting the ethnographic exhibits, the task of the curatorial staff–apart from projecting the purpose, the use and the local origin of these exhibits – is to ensure that those ethnographic exhibits come alive to the visitors as individual ethnographic phenomenon grouped with their appropriate cultural contexts.

The casual visitors drawn from the cross-secoons of the present society geoerally do not evince much interest towards the ethnographic exhibits as they get uprooted from their original cultural contexts. And hence, these ethnographic exhibits have to be presented in such a way that they convey their cultural contexts and convey the message inherent in them. And consequently, the curatorial staff adopt various exhibition techniques to recreate the intended cultural

contexts to the ethnographic exhibits, which were uprooted from their original cultural contexts.

In the organisational level, the ethnographic exhibitions generally aim-

i. To catch the immediate attention of the visitors and
ii. To enliven the aroused interest and thereby compel the visitors to go through the whole exhibition arena.

And both these are accomplished only when the cultural contexts to the ethnographic exhibits are replicated and or restored by way of recreating their lost cultural contexts, by adopting appropriate presentation techniques. Such a deliberate setting that centered around a theme provides a congenial ambience wherein the visitors are forced, without realising it, to conform to a predetermined itinerary that keeps them attentive and alert as well.

Present Trends in Museology in Recreating of Cultural Contexts to Ethnographic Exhibits

In the realm of museology, the curatorial staff adopt the following current trends of presentation techniques in their attempt to restore the cultural contexts to the ethnographic exhibits:

Dioramic Presentation / Habitat Presentation

As in the case of the Period Room Presentation, the Dioramic Presentation (also known as Habitat Presentation) also tries to replicate the cultural contexts of the ethnographic exhibits. That is to say, the ethnographic exhibits, which were uprooted from their original cultural contexts, have been provided herewith-reconstructed cultural contexts. And such sort of dioramic presentation is considered generally as the most effective and impressive way of bringing home to the general public the manifold wonders of Nature and Culture.

In this technique of presentation, the ethnographic exhibits are presented in their endemic cultural setting against a carved panoramic background on which the appropriate landscape is painted. Such

Group Cases with painted backgrounds fulfil the task of telling a complete story vividly, if properly construed. For instance, the built-in group dioramic showcases apparently constitute part of the building on either side of a large and spacious gallery and the visiting public feel as if they are looking out through a large window into a distinct cultural scene in wild nature as they walk along such galleries.

On account of their prohibitive cost and the amount of time and labour involved that only a very few ethnographic exhibitions in India attempt to install such diorama showcases. Even after such huge expenditures there is every chance for only the colourful background of the dioramic showcases but not the 'primary exhibits' receiving much more attention of the visiting public. Therefore, the dioramic showcases are likely to be considered as stereotypic presentations with the passage of time.

Theme-specific Presentation / Thematic Presentation

The mute and unfamiliar ethnographic exhibits are also made to converse with the viewing public if a story (i.e. Theme) is built around them. With the introduction of such themes a more Exhibit-oriented Presentation turns into a more meaningful and highly effective Theme-specific Presentation ('popularly known as Thematic Presentation).

Such Theme-specific Presentations are now-a-days more appreciated than the age-old Exhibit-oriented Presentations as the former category encapsulates the mankind and its culture in totality, unlike the latter, which normally shows a few examples for the sake of their variations and more civic-values).

Wire-mannequin Presentation / Wire-dummy Presentation

As pointed out earlier, the visiting public generally gets fascinated more towards the colourful background in dioramic presentation than its primary exhibits. To avoid this disadvantage and at the same time to ensure that the principal exhibits alone are projected, the

'technique of wire-mannequin' (popularly known as Wire-dummy Presentation) is introduced as one of the exhibition techniques while trying to recreate the cultural contexts to the uprooted ethnographic exhibits.

Furthermore, by employing such wire-mannequins (popularly known as wire-dummies) the actual position and or utility of the ethnographic exhibits are highlighted vividly. For instance, the presentation of ethnic costumes and ornaments on wire-mannequins/wire-dummies has been found to be very attractive and practical as well. For example, the gallery of the Tribal Art Style of North East at the National Museum, New Delhi has adopted this exhibition technique while presenting the ethnic costumes of the tribes of Northeast India. And thus, in this presentation technique every ethnographic exhibit is given its due prominence, as it has enjoyed in its original cultural context.

Environmental Approach

The feasibility of breaking the space and presenting the ethnographic exhibits directly before the viewing public in their endemic cultural milieu has been experimented in the major Indian museums quite recently. One of the significant tasks of presenting the ethnographic exhibits are the recreation of the environmental background to the primary exhibits of ethnography and consequently such presentation technique is termed aptly as the Environmental Approach. Examples for this type of exposition could be cited from the Village Complex and the Tribal Habitat open-air presentations of the Indira Gandhi National Museum of Mankind, Bhopal.

In this Environmental Approach the immediate impression is created by the selected exhibit-designs and the recreated environment. Here, both the modern equipments of presentation and the conventional materials are used as well[5]. Even the background colour, floor covering etc., which are overlooked normally in other presentation techniques have been given a careful rustic touch. On the whole, the

total effect of this exhibit-design is an antithesis of the modern audio-visual techniques. Such open-air environmental presentations could be maintained only by an ethnographic exhibition of considerable standing, having a huge fund, substantial manpower and other requisite sources. Further, this type of presentation poses obviously a big problem in maintaining security. And there are also chances for constant threat of fire hazards and natural calamities, apart from possible art vandalisms and misuse by human agencies. Nevertheless, we should bear in mind that it is not possible to render a meaningful and judicious presentation for all types of ethnographic exhibits in an environmental system. For instance, the ethnographic exhibits connected with the habitation pattern, minor economic activities and sacred complexes may be exhibited successfully in an environmental unit while small and more delicate exhibits of ethnography such as ethnic ornaments require naturally more secure condition in the presentation. The National Handlooms and Handicrafts Museum, New Delhi has adopted this judicious admixture of both these presentation techniques. Interestingly enough, the exterior as well as the interior premises of this museum has been provided thoroughly with rustic touch.

Conclusion

As the ethnographic exhibits lose their significance as and when uprooted from their original cultural contexts, the curatorial staff are entrusted with the responsibility of restoring the last cultural contexts, by employing suitable presentation techniques to achieve their goal. A thorough knowledge of present trends in museology will keep fit not only the curatorial staff but their techniques of presentation as well in the fast moving track of modernisation.

Footnotes

1. Folklorists, on the contrary, object heavily to such practice of recreating of cultural contexts artificially.

2. The term 'Display' is avoided purposely in this paper and in its place the term 'Presentation' is used throughout, as the former is used and exploited like anything in the commercial arena.

3. Museologists and Museographers argue that the exhibits belonging to other disciplines also found to possess manifold values and hence their presentations also ought to be planned meticulously so as to ensure that not even a single value of them is getting affected.

4. Presently, the entire ambience in exactitude is brought out very effectively by providing digital photographic images printed in vinyl sheets. Such adoption of dioramic presentation was quite recendy attempted at the 'Mammal Gallery' of the Zoology Section of the Government Museum, Chennai.

5. The Rock and Cave Art Gallery in formation at the Government Museum, Chennai could be cited of adopting this line of presentation by combining the modern gadgets of presentation along with conventional materials.

References

1. Das, A.K. (1979) Tribal Art and Craft, Agam Kala Prakashan, Delhi.

2. Das, A.K. (1989) Museography for Ethno cultural Materials. Agam Kala Prakashan, Delhi.

3. Das, U. (1988) "Storage of Ethnographical Collections", 95-102, Journal of Indian Museums, 38.

4. Maheswaran, C. (1998) Exhibition Techniques for Ethnographic Materials, Directorate of Tribal research & Development, Udhagamandalam.

5. Maheswaran, C. (2003) The Masking Tradition in Tribal India, (Unpublished Research Report), Small Study & Research Grants (India) of the Nehru Trust for the Indian collections at the Victoria & Albert Museum, New Delhi.

6. Nigam, M.L. (1966) Fundamentals of Museology (Revised & Enlarged Edition:1985), Deva Publications, Hyderabad.

7. Satyamurti, S.T. (1957) Technique of Group Case Construction and Special Effects in Dioramic Display, Journal of Indian Museums, 13.

** Curator, Government Museum, Erode - 638 001.*

Display in the Government Museum, Sivaganga

** T. Packirisamy*

Introduction

Display is one of the most important aspects in museology. In order to fascinate the visiting public, display plays a major role. Display goes with proper lighting. The lighting can be natural or artificial. Whatever may be the form of light, certain measures are to be taken. Light should not be focused directly over the exhibits. Prior to the display, the physico-chemical parameters like temperature, light, relative humidity of the atmosphere in the galleries should be studied. The exhibits of Government Museum, Sivaganga are displayed section wise viz, Archaeology, Numismatics, Anthropology, Art, Zoology, Botany, Chemical Conservation, Geology, Children's and newly collected exhibits from the locality.

Introduction Gallery

When one enters in to the museum building, one can see the Introduction Gallery. District map and photographs showing the historically important places of Sivaganga district with descriptions are displayed in panels to introduce about the district to the visitors.

Archaeology Objects

Archaeological collections include stone sculptures, woodcarvings, bronzes, metal wares and household articles of *Chettinad.* Stone sculptures and stone inscriptions displayed in the Sculpture Garden attract the public to the museum. At the entrance of the gallery, a musical stone is exhibited. This musical stone when struck with a

wooden hammer plays seven nodes *Sa-when ri-ka-ma-pa-dha-ni.* This fascinates the visiting public. Wood-carvings are displayed in a wooden panel. Bronze icons are displayed in wooden showcases with glass fronts. The bronze icons are arranged according to the chronological order. Metalwares and *Chettinad* household articles are displayed in a showcase.

Coins

Punch marked coins, coins of Indo-Greek, Kusban, Gupta, Western Chalukya, Chola, Mughal, Tippu Sultan, East India Company are replicated in metals and displayed along with photographs. A small section of stamps of various countries are also presented.

Anthropological Objects

Anthropological collection consists of prehistory, arms, ethnography, musical instruments etc.; a diorama showcase shows the prehistoric environment along with related objects. It shows the use of Palaeolithic stone tools like hand axe, cleaver, scraper, chopper in hunting animals by Palaeolithic man. Megalithic period burial urns, potteries and bone fragments are also displayed. Arms like guns, swords and boomerangs (both metal and wood) are displayed. Ethnographic artefacts like leather puppets and wind instruments and percussion instruments are also displayed in a separate vertical show cases. Photographs of treasure-trove jewels are exhibited.

Paintings

Oil Paintings on canvas are displayed on wooden panels.

Zoological Objects

Zoological specimens preserved both by wet and dry methods are displayed in showcases. Stuffed specimens, land tortoise, varanus, crab are dry preserved, whereas snakes displayed are wet preserved. Apart from these, a diorama showcase showing marine environment consisting of coral reefs is one of the attracting showcases.

Botanical Objects

Botanical specimens are displayed on the basis of economic and

systematic importance. Under Economic Botany, various timbers, plants, medicinal plants are displayed. Under Systematic Botany, herbaria are exhibited with details of the plants.

Chemical Conservation

Photographs showing the conditions of objects like painting, bronze icon, coins etc., before and after chemical treatment are displayed in order to educate the visiting public.

Geological Objects

Rocks, wood fossils, minerals and various types of soil and rocks, graphite etc., collected in Sivaganga district are displayed in showcases.

Children's Section

Metal objects depicting temple car, pot, snake, lizard, butterfly, tortoise, elephant, deer, basket, chair, lamp, bell, comb, spoon, conch etc., are exhibited in a showcase. Art competitions, training programmes etc., are conducted as part of the extension services.

Conclusion

This museum attracts many visitors through its collection and their presentation in the galleries.

References

1. Dwivedi, V.P. (1980) Museum and Museology – New Horizon, New Delhi.
2. Nigam, M.L. (1985) Fundamentals of Museology, Hyderabad.
3. Anupama Bhatnagar (1999) Museum Museology and New Museology, New Delhi.
4. Sethuraman. G. (1996) Museology, Museum and its Techniques, Madurai.

** Curator, Government Museum, Sivaganga - 630 561.*

Present Trends in the Botany Galleries

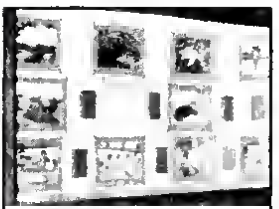
* *M.N. Pushpa*

Museum, the temple of muses which conveys the meaning that it is a place of knowledge. Museum's essential contribution is to provide education and inspire the visitors through its updated display. Museums are the centres, which try to develop a scientific attitude of mind to the people who visit the museums. The present trend of the science museum is to inculcate self-learning through exhibits thereby influencing thoughts and attitudes. Today we are at the cross roads of civilization and entering into a new era of rapid global technical advancement. Thus the cultural centres like museums having science galleries play a vital role of educating the people in the natural, scientific and technological facts that promote the application of science.

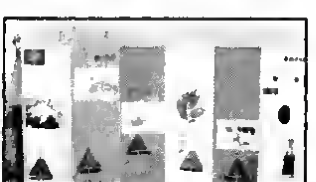
In this article concentration is given more on the recent trends followed to generate sustained interest and inspire visitors towards creativity through exhibits, learning materials and literature. Education through display serves as an information source to common man, students and professionals. Exhibits in the botany galleries are thus getting modernised.

Since the botanical specimens are rather flat and devoid of their colour, their display required special methods of exhibiting. Thus the Systematic and Economic Botany Galleries have been modernised to render the display of exhibits as pleasing and attractive as possible. The original specimens on display are mentally absorbed by the visitor directly. Thus the reserve collections collected over the years displayed in the herbarium drawers speaks about the rich flora, the extinct and endangered specimens. The dioramic exhibition speaks about the natural and environment flora.

Museums are not merely treasure houses of art and science objects but are also Visual *Gurukulam,* since they teach all types of visitors in almost enjoyable way. Different types of exhibits elicit different ways of responding. Exhibits are appreciated the most when they relate to visitor's prior interests or application in their progression or curriculum or profession particularly in the case of students. The subject of fibres, millets and pulses, spices, oil, drugs etc., attracts the attention of all sorts of people right from the layman to the scholars in Economic Botany due to their attractive display panels which had been designed based on their needs. Exhibits like perfumes, toys, mat etc., help the visitors to use the plant wealth or grow economic species to augment their income in their spare time. The Economic Botany Gallery had its first reorganisation in the year 1961 with 19 built-in wall showcases and ten sloping cases. Since the sloping cases in the middle did not help easy visitor movement another reorganisation was done in 1984-86 and again in 1996. Special display techniques using proper background, new types of containers for specimens like grains, seeds, flowers, usage of minimum two colours, special cutouts for specimens like perfumes and oils, the bilingual labels along with descriptive labels and captions in cut-out letters in wood sub-titles in thermocole, special internal lighting effects in the diorama cases are some of the recent techniques carried out. The centre of the Economic Botany Gallery has been used for installing four diorama showcases and eight show-cases apart from nineteen built in wall show-cases.



Showcase before Refurbishment



Showcase after Refurbishment

Till the middle of the 19th Century, the botany galleries were confined

to Morphology, Anatomy and Taxonomy. Later based on the needs of the public and the students ecology specimens were well arranged. Inculcating interest in the subject of botany is the aim of the gallery. It is a bit difficult task, but it has been done successfully in the botany galleries of the Government Museum, Chennai in spite of the space restrictions. Botany has its most commonly understood application in agriculture. The agriculture produces are displayed in well-designed containers.

Horticulture is maintained by developing landscape and the garden in the museum campus. The trees in the museum campus are maintained as part of a Botanical Garden. After introducing proper labelling with information such as the family to which it belongs along with vernacular names received a lot of appreciation from the visitors.

Trees like *Mangifera indica* (The Mango), *Polyalthia longifolia* (The Ashoka tree), *Lawsonia inermis* (The Maruthani) some with possess antimicrobial activity purify the atmosphere and hence are planted in large numbers. Facts like these, when told to the visitors, arouse their interest in nurturing the plants and trees.

In the systematic Botany Gallery, thematic exhibits like the plants mentioned in the *Sangam* literature have been collected and displayed along with the taxonomical classification and literature quotation serving the needs of the students and scholars to know about the plants eg, *cenkantal, ambal* etc. When the public stand before the timber showcase, automatically they take note of the types of timber used in the construction, furniture making, wood carvings etc. From the year 1996, collaborative programmes like the Siddha Medical Camps with the Government Siddha Medical College, Chennai highlight the medicinal value of plants that benefited the public. Live potted plants arouse the interest of the people to identify the plants, which are helpful in their day to-day life. Reading habit of the public, lead them to get useful information through the publication in the subject.

Biological Preservation Course - a Museology Course

From 1993 the Botany and Zoology Sections combined together conducted a training course on the Preservation of Biological Specimens extending for a period of one month. Under the Vocational Training Programme, B.Sc, students of Bharathy Govwernment Women's Arts College, Chennai were trained under the U.G.C. assistance, which was the first of its kind, and received much appreciation from the U.G.C. since the course improved the learning skill of the students. Science demonstration lectures, museology course etc., offered to teachers, and teacher trainee students have helped them to develop the teaching materials.

Introduction of Information Technology

Creating website, and digital documentation of botanical objects as 'AA' and 'A', are the hi-tech introduced which serve as the most useful information bureau. This was the result of the constant effort of the Curators under the leadership of the Commissioner of Museums which ultimately resulted in the formation of the biggest website in the world of museums compising 1400 pages of A4 size covering all the sections of the museum. This sets the best example for the advanced technology adopted in the subject of museology. In the website created for the botany galleries, the illustrative exhibits were highlighted according to the taxonomical classifications.

Today the Government of India and the State Governments are interested in the fundamental education of people who have not had access to formal schooling. As illiterate adults cannot be taught by books the education is substituted through visual exhibits which makes them understand better. Centres like museums help in this regard. They help to learn from exhibits and they act as places of informal learning.

Thus the Botany Section of the Government Museum, Chennai through its various extension programme and the latest information technology like the website and digital documentation help the public,

students and the scholars to receive the maximum benefit. The potential of the botanical collections reaches the mass. The ancient Chinese proverb-I bear and I forget, I see and I remember, I do and I understand-can be cited here. The Science Museums are functioning as 'resource-centres'.

References

1. Chandrasekhar, M.S. (1970) Botany in Indian Museums, Department of Museology, University of Baroda.
2. Ghosh, D.P. (1968) Studies in Museum and Museology, Indian Publications, Calcutta.
3. Pushpa, M.N. (1997) Handbook on Preservation of Botanical Specimens, Government Museum, Chennai - 600 008.
4. Rawson, P.S. (1965) India-Museology, UNESCO, Paris.
5. Satyamurti, S.T. (1964) Handbook of the Madras Government Museum, Chennai.

* *Curator, Botany Section, Government Museum, Chennai - 600 008.*

Computer Application in Museography

* *K. Sekar*

Introduction

Museography denotes the entire spade work that needs to be done to convert the visualisation of the museologists in to a real form. The specially trained skilled persons who involve in this museographic venture are collectively known as museographers. Computer application and the utilisation of computer peripherals to the museographers in each and every aspect of museography are the main focus of this paper.

Museology

Museologists are the persons who develop thematic concepts, look far beyond and propagate knowledge of the available material evidences and artefacts to the visiting public. Museums are the place where the real artefacts or specimens are available for public view and make use of them to any level of research depending upon the interest, skill etc., of an individual. Depending upon the kind of museums the concept and motto may deviate, but the basic five fold objectives of museology ie. collection, conservation, documentation, design and display, research and publication will remain the same. There is a change from the 16th Century concept of museum as a store house of antiquities to service provider for the spread of knowledge (according to Dr. R. Kannan, Commissioner of Museums). Therefore, the role of museologists extends in multi dimensional area as a field explorer of artefacts and specimens; as a conservator to conserve for posterity; as a custodian of artefacts and first impression report generator through documentation; as an architect and learned engineer to develop design concept and execute the visualisation in the real form; as an academician fonder over objects to get knowledge for the benefit of society, correlate with similar museum objects and through his extensive research, gets feed

backs from scholars and confirms the historical facts and figures in appropriate scientific way propagates through publication and other medium of communication.

Computer

What is a computer? A computer is a programmable, multi usable machine that accepts data - raw facts and figures and processes or manipulates in to various forms according to our requirements. Software is a programme that consists of the instructions that tells the computer how to perform a task. System Software and Application Software are the two kinds.

Application software is one that has been developed to solve a particular problem, and to perform useful work on specific tasks. Speciality software is one among the many categories of application software. It comprises of the software like Desktop Publishing, Presentation Graphics, Project Management, Computer Aided Design, Drawing and Painting programme, Multimedia Authorising etc.

The application of Information Technology is the modern trend in the multi-disciplinary and multi-faceted functions by utilising the electronic devices like computers and information highway.

Present Trend

It was sufficient in those days to have a few persons like a skilled cabinetmaker, painter cum polisher, an artistic minded housekeeper to form a self-contented team to manipulate the vision of the museologists. Today as the concept of the museum has been changed from storehouse to service provider for the spread of knowledge in multi dimensional areas in digital era, computer professionals and their team leader with museological knowledge are absolutely necessary to form a better team for the museographic venture.

The computer application that supports in each branch of

museography (otherwise a *conglomeritic* work) is briefly elaborated below :

Designing

Using computer aided design (CAD) software, line sketches as per scale can be drawn by a Draughtsman on a computer screen. This can be manipulated and reutilised for the redundant details like pillars, windows, ventilators etc. Therefore multiple views with various modifications of the line sketch may be generated on different scale width with in a short time. More over easy documentation and retrieval of the sketches, auto measurement of any fragment of sketch etc., are also possible.

Virtual view of a Bronze Gallary Showcase

It is a well-known fact that designing a modern museum gallery with out deviating from the basic principles of museology is cumbersome. Opinion may differ from museologist to museologist. Hence various types and portions of sample design may be manipulated and finalised to suit the need of a requirement. In those days prototypes were the only way to visualise one's own design. But now 3-D Studio Max and perspective view of the CAD may cater to the needs of a designer and concerned museologists to visualise a virtual gallery and may have a virtual walk through.

Real view of a Bronze Gallary Showcase

3-D Modelling and Animation

3-D modelling software has increasingly entered the mainstream of graphic design as it is easy to use and improve. With 3-D modelling software, virtual objects render to appear more realistic; one can create stunning scenes and walk through them, choosing just the right

Virtual View of the Industrial Art Gallery

lighting to achieve ones final rendered image.

Application of engineering skill is essential to convert the virtual view in to reality. It starts from the careful selection, quality and bill of materials, which need market survey regarding the availability and range of products and technology that are available in the global market. Kind of joints, fixtures and their stress and strain, load bearing capability, user and visitor friendly compatibility etc., should be considered. Hence, browsing website and application of specialised software in the subject caters the needs of a designer.

Real View of the Industrial Art Gallery

Dioramic Presentation

Photography is the widely accepted visual documentation of natural habitation, environment etc. An Artist Modeller has to convert the imagination of the Curator and simulate the environment of the objects on display, into a realistic view. The background and foreground work of a diorama showcase depends on the skill of the modeller. Software like Corel Draw, Adobe Illustrator and Macromedia paves a better way to create virtual view of this task in short time. The Flatbed and Drum Plotters may print the virtual view on paper or vinyl medium depending on the requirement.

Digitally Created Diorama Showcase Backdrop

Painting Software such as Photoshop, Picture Publisher and Fractal Design Painter are dedicated to producing crafted bitmap images. Drawing software such as Corel Draw, Freehand, Illustrator, Designer and Canvas are dedicated to produce vector-based line art easily.

Palm-Leaf Manuscripts and Estampages on Electronic Media

Digital Photograph of Palm-leaf Manuscripts

Digital photography of manuscripts will ensure that the copy of the original writing is available to scholars. The same methodology was extended to copying of inscriptions instead of estampages.

Digital Photograph of a Copper Plate Grant

Museum photography needs more scientific approach and skill. Digital camera suits perfectly as it gives immediate view on screen and is cost effective. Computer packages like Photo Editor and Adobe Photoshop can be utilised for the manipulation of the selected frames. In the Government Museum, Chennai so far 10,000 snaps were taken by a digital camera from March 2002 to November 2003. Moreover the photographs, which need higher resolution can be taken and downloaded straight into the computer easily and can be manipulated by applying many layers.

Printing Technology Support for Museum Reprography

Software packages like Desktop Publishing, which includes Corel Draw, Adobe Photoshop, Adobe Page Maker, Microsoft Word, Quark X-press, Illustrator etc., support formatting activities of one

who is in the job of printing. Various peripheral devices, which support to obtain hard-copy output of the text and images in several formats are available.

Electronic Surveillance and Control Room for Galleries

The museum relies on gallery guards for watch and ward and its security. This method cannot cope up with the security problems of the 21st Century. In the Government Museum, Chennai, Security Management Control System (SMCS) comprising of electronic surveillance system, intrusion burglar alarm system, fire protection and communication systems are being installed. A central control room operating electronic video camera surveillance units linked to a computer network, which has the capability for remote monitoring, if felt necessary through the TCP/IP Protocol. The round the clock monitored data stored through a Digital Video Recorder (DVR) will serve as a visual evidence for any type of post operation.

Conclusion

The main mission of a museum is preservation of the past materials and its knowledge for posterity and their ready access through display. Computer application has enabled the museographic venture in the best professional manner in a very short time. These are physical manifestations of the mental change from blindly repeating what was done in the past to thinking afresh on matters of presentation suiting to this day. Therefore the computer application in the field of museography is one of the present trends, which is inevitable for making a museum attractive and meaningful.

References

1. Kannan Dr. R. (2002) Museums, Scenography and Tourist Attractions, *Museum's Journal* of the Government Museum, Chennai, Vol. -7, May 2002.
2. Mary Joseph and Suraphi, G.S. (2000) *Easy Computer,* SISO Publishers, Tiruvandapuram, Kerala, November 2000.

3. Stacey C. Sawyer, Brain K. Williams, Sarah E. Hutchinson, *"Using Information technology - A practical Introduction to Computers & Communications"*, 3rd Edition, McGraw-Hill International Editions, 1999.

4. Tay Vaughan, *"Multimedia making it work"*, 4th Edition Tata McGraw Edition, 2000.

5. John F. Koegel Buferd, *"Multimedia Systems"* Published by Addision Wesely Longman. 3rd Edition Year 2000.

6. David Hillman, *"Multimedia Technology and Applications"*, Galgotia Publications Pvt. Ltd., Year 1998.

** Curator, Children's Museum, Government Museum, Chennai - 600 008.*

Role of Information Technology in Museums

* *Dr. S. Darsana*

Introduction

Museums are conceived as a medium for imparting information about the culture and nature of a region. However, most of the museums in India are till using conventional methods in managing and exhibiting the collections. The scope of museums is expanding with the introduction of the globalisation process, which has brought many changes in the contemporary world. One such change is the desire to know about and visit other regions and their cultural and natural heritage and the development of the technology to fulfil that desire. The information imparted in museums can reach a maximum number of people across the globe within limited time through the application of technology i.e. the Information Technology (I.T.). The Information Technology, if used intelligently, can do many wonders in museology. This paper analyses the role of the Information Technology in museums of India. The application of Information Technology in the initial designing, architecture, collection, documentation, exhibition and education and interpretation of museum objects is highlighted in the paper.

What is Information Technology?

Information Technology is the combination of telecommunications and computing to process, store, transmit and output information in the form of voice, pictures, words and numbers[1].

The various media through which I.T. can be applied are,

- Computers with Various Software Programme
- Internet (World Wide Web - Websites - Virtual Tours)
- Interactive Kiosks/Touch Screens
- Digital Display Boards (Audio-visual Aids for Video Shows/ Audio Guidance)

What is a Museum?

The International Council of Museums (ICOM) defines museum as a non-profit making permanent institution, in the service of a society and of its development, and open to the public, which acquires, conserves, researches, communicates and exhibits, for purpose of study, education and enjoyment, material evidence of people and their environment[2]. To put it in a nutshell, museum is an institution meant for transmitting knowledge about people and their cultural and natural surroundings.

I.T. and Museum

Museum is an effective medium to impart information. However, most of the museums in India follow the traditional methods of disposing information such as the display of objects with unattractive labels. As a result, interaction between the visitors and the displayed objects is absent.

The use of I.T. can bring dynamism and interaction in the museums. The information that the museum is communicating can be made interesting to all sections of visitors (target audience), through the application of I.T. Information Technology can help museums to shed their passive role and be user-friendly. One of the main aims of the museums is effectively exhibiting their collections to more people, which can be achieved through I.T. with global networking, which can reach a wider audience.

Introduction of I.T. in Museums

As regards the museums, the application of I.T. is a recent phenomenon. In 1994, Jonathan Bowen created a Website at Oxford that provided links to a small number of museums across the UK and the USA. The Virtual Museums giving detailed information on various online museums in the world is one of the popular sites with thousands of visitors per month.

Indian Scenario

In India, despite regarded as the hub of I.T., the application of I.T. in museums is very negligible. There are only very few museums with Websites viz. National Museum, New Delhi, Indian Museum, Kolkata and Government Museum, Chennai to name a few. Even this web display of the museum collections is static and these Websites do not have interactive facilities.

The virtual tour of galleries is also unheard of in museums of India, except a few museums such as Government Museum, Chennai offering a virtual tour of the Bronze Gallery. However, downloading the software for viewing these rare virtual tours is time consuming. There is no unified web links for all the online museums of India. A search of Indian museums on the most popular Website of museums (Museumstuff.com) provided only a list of two museums, when compared to that of US and European countries, which provided a list of more than 100 museums (per country), thus indicating an insignificant global presence.

Application of I.T. in Museums

I.T. can be applied to almost all functions of museums, which would help in the overall management of museums. The following areas are identified as potential areas in museums for applying I.T.

- Architecture
- Collection
- Documentation
- Preservation
- Exhibition/ Designing
- Education

Architecture

As most of the existing museums are located in heritage buildings, any change or modification in the plan is a difficult process. And, there are also a growing number of museums set up by private individuals and educational and religious institutions. To set up a

museum or modify the galleries, I.T. can be used in the virtual manipulation of space and objects. A general layout with the position of galleries and objects can be done virtually with the use of relevant software. A specialised lay out according to the target audience can also be prepared. These cost-effective virtual layouts, without the use of cement and bricks, give freedom to plan and execute the desired models and make changes in them.

Collection

In the collection management, the data pertaining to all the collections can be stored in databases. These records can be manipulated to manage and monitor the collections in the museums[3]. Without constant handling, an object can be studied for various purposes-administrative, storage and research, through the available information stored in the computer.

Documentation

Any object that enters museums should be documented. Various records such as GAR, CAR, Index Cards, and catalogue records are maintained in a museum. These documents can be computerised so that the location and identification of objects becomes easier for the staff and users of the museums. This documentation in computers can be helpful at the time of disasters too as the stored data can be kept in a CD or a floppy in a safe locker.

Preservation

The museums as repositories of our heritage have the responsibility of protecting the objects for posterity. This is possible only through careful maintenance and periodic conservation treatment to the objects. I.T. can play a vital role in this major function of museums, with a software programme designed to send periodic reminders to the conservation staff for the periodic treatment. Once the treatment is done, the staff can enter the status of the object, treatment given and next due date for further treatment. This will help in tracking down the problems in the object even if the staff concerned is on

leave, transferred or left the job. The treatment carried out also can be recorded.

Exhibition/ Designing

One of the potential areas where I.T. can contribute effectively is the exhibition/display of objects. It can start with the **designing of a gallery**, where the colour, lighting, position of show cases and objects can be manipulated and altered according to the needs of the visitors. The colour of the wall, roof and floor, the effect of light on the objects, movement of visitors and control of access can be constructed virtually and changed as per the need and the budget. I.T. can be used for satisfying the needs of both the users and non-users of Information Technology.

For Non-Users of I.T.

An **audio-visual show** can be arranged before the visitors enter the museums, so as to give them a background idea about the museums and various galleries with their collections. An **interactive kiosk/ touch screen** (with or with out audio) can be created in the gallery as to give introductioo of the objects to the visitors. An **audio** guiding of visitors in regional languages and English would help the visitors in understanding the objects more effectively in the absence of guides.

For Users of I.T.

Creation of **websites** of museums would be useful for the visitors to know before hand the type of galleries, collections and other basic information about museums. These websites are useful not only for the local visitors but also for the foreign tourists.

Creation of **virtual tours** is a powerful tool of I.T. in museums. Apart from global access, the objects that are very precious and shown to public only on certain days can be given importance in the virtual tour facility provided in the museums.

Education

Museums are seen as places of old and dead objects by school children, but they can be made into valuable source for educating the masses. Online teaching for school kids on the important collections and making them participate in the museums' online activities can be adopted by museums. Creating online mutual exchange programmes such as forums, and newsletters can target the general public.

Conclusion

If used with care and caution, the I.T. can provide the necessary boost to the museums. Most of the methods are cost-effective. Combining the traditional display with modern technology can bring more people to the museums, which in turn will create more awareness about our heritage. The museum personnel must have a good knowledge of I.T. to do this.

References

1. URL:http://www.education.gov.lc/AGSS/Transcending/Subject%20Sites/Information%20Technology/what_is_information_technology.htm
2. Ambrose,T and Paine,C (eds)(1993) *Museum Basics,* Routledge, London
3. Edwards, D.L and Black, L.F. (2000) Museums, Collections in the Information Age, *Cultural Resource Management,* No. 5 2000, National Park Service, USA.
   URL: http://crm.cr.nps.gov/archive/23-05/23-05-20.pdf.

* *Curator, Centre for Heritage Studies, Hill Palace, Tripunithura, Kerala.*

Models and Metaphor in Museum Display

** R.D. Thulasi Brinda*

There is a change from the old concept of museums as a place where artefacts are stored safely. To visitors, a museum is a place where antiquities are displayed with some explanatory labels. The modern trend is to attract visitors with appealing lighting, highly advanced technology preferably interactive exhibition etc. Museums have to compete with other attractions like amusement parks in attracting visitors. They have to educate while entertaining. Research into new display methods is important. This paper is theoretical in orientation and I wish to present or brief about the contemporary archaeological practices in the West with a sole aim at inviting further debates on the relevance of theoretical shifts of mid-sixties, leading to the rise of what is popularly known as New Archaeology.

Archaeology has often shown great adaptability as instance of special mention being the theoretical and methodological departures in 1960's culminating in the rise of New Archaeology or Processual Archaeology when the discipline, like some of its sister branches of social sciences, coped rather well with the developments in philosophy of science, particularly with Thomas Kuhn's (1977) idea of a paradigm change. This was the time when age-old culture historical approaches in Archaeology were being downgraded and challenged by a new generation of enthusiastic scholars with scientific temperament (Binford 1972, Salmon 1982). However maladaptation in this shift was soon evident when David Clarke, one of the pioneers of the New Archaeology Movement, cautioned against the increasing use of scientific procedures in archaeology. In sharp contrast to his earlier theoretical and methodological experimentations Clarke proclaimed with reason that archaeology was losing its innocence because it was embracing a rigorous scientific approach with agreed sets of procedures, models and theories.

According to Feyerabend (1987), scieoce is one of the many forms of thought that has been developed by man and not necessarily the best and the separation of science and non - science is not only artificial but also detrimental to the advancement of knowledge[1].

Students of archaeology are familiar with recent reactions against the otherwise popular New Archaeology with regards to latter methodological biases, particularly formulations of rigid scientific laws on human behaviour and insistence on systemic iconological functionalism and techno-environmental determinism[2]. One finds here a systematic effort to treat archaeology as a natural science, rather than a human science. The modernist bias among new archaeologists seeks to highlight change as the major focus of research. In order to regain its lost innocence, archaeology has to move beyond the shackles of rigorous scientific procedures under a unified paradigm.

Here I would like to highlight a concern[3] from a different perspective by introducing the notion of metaphoricity associated with complex intellectual discourses and discursive modes of communication[4]. The word metaphor has been described[5] in two ways i.e. in the poetics it is conceived as something larger than analogy, in rhetoric analogy becomes the paradigm for metaphor. In its larger sense, metaphor is merely the use of a different word/name instead of the proper one and in the restricted sense, it is what we more easily recognise as metaphor – the figure of speech par excellence of similarity and analogy. Modernism often in conjunction with imperialism and colonialism, being the hidden message of the archaeological metaphors in the West, archaeology has certainly failed to be innocent. Western archaeology has been able to hide its prejudices behind the mask of intellectual metaphors. By contrast, Indian archaeology and other third world archaeologies are transparent and more innocent than their Western counterparts.

Archaeology has an ideological dimension, which is used as it were for the justification of certain contemporary dominant tendencies touching upon political, social and cultural domains (Gero1989). It can be mentioned following Trigger (1989), that archaeology from its inception had a politico-ideological role to play. It is largely for this reason; some radical post-processualists like C. Tilley describe archaeology as a socio-political action in the present[6]. For example, decision theory, game theory and optimisation models painted with contemporary way of thinking are being applied with great enthusiasm in archaeological researches[7]. The optimisation model, emphasising maximum profit for minimum cost or risk has gained popularity in archaeology which functions to legitimise capitalism as the universal economic pattern of behaviour. In this context, it can be mentioned that Marshall Sahlins, while dealing with tribal societies of past and present, rightly attacks the entrepreneurial and individualistic conception of economy as a means-end relationship. He maintains that economy in such communities becomes a category of culture rather than behaviour in a class with politics or religion rather than nationality or prudence; the material life-process of society instead of the need satisfying activities of individuals.

Similarly, a host of models derived from various scientific disciplines – mathematics, biology, physics, anthropology, geography and so on – are being used which speak more about the present rather than past tendencies; past is only used in this intellectual game towards a desired end i.e. delivering certain messages often with dangerous socio-political connotation, which if said in ordinary language would not only be ridiculous but also objectionable and unacceptable.

Insensitivity associated with such objectionable claims through ordinary language finds a shield in metaphors and the same message might become palatable not only to the non-Western others but also to self-critical and image conscious Western readers.

The principle of biological determinism is often used, rather uncritically, in anthropology and archaeology. Beside the ideological content in science and the so-called scientist archaeology implicit in such practices is the use of extended metaphors. In this regard, we must remember Max[8] who studied the close resemblance between the use of models and the use of metaphor. With a view to substantiate his view of scientific models as an extended metaphor, he quotes Hutten, a physicist as follows:

We are forced to employ models when for one reason or another, we cannot give a direct and complete description in the language we normally use. Ordinarily, when words fail us, we have recourse to analogy and metaphor. The model functions as a more general kind of metaphor.

Here it may be noted that compulsion to use a model as a metaphor by physicists need not be the same as that by an archaeologist. Ordinary language may certainly fail a physicist to express his complex notions concerning quantum mechanical or sub-atomic reality. But in the so-called scientistic archaeology, this compulsion is often derived from the fact that the message being conveyed can be unpalatable and objectionable. So it is through the use of scientific models as extended metaphor that some messages are imposed. Thus, models as metaphors often function to camouflage rather cleverly, certain vicious and manipulative intentions.

The use of a number of metaphors behind the scientific models is found in New Archaeology. By denying cultural particularism and highlighting universalism of human culture governed solely by techno-environmental determinism. Now archaeology tries to establish a Europocentric view. The essential logic is that humankind is subject to external constraints (environment) and it is technology (of culture) that leads a society towards progress. Thus by denouncing culture-historicism, New Archaeology has essentially been tackling the problem of identity crisis of certain societies. It did nothing to

satisfy third world societies with otherwise rich cultural heritage. By being scientific, New Archaeology remained insensitive to the cultural values of other societies.

Scientific knowledge is too specialised and connected with too narrow a vision of the world to be taken over by society without further delay. It must be examined, it must be judged from a wider point of view that includes human concerns and the values flowing there from and its claims to reality must be modified so that they agree with these values.

Therefore I conclude that caution must be taken against the continued use of insensitive metaphors in archaeology. It is suggested that such tendencies should be diagnosed or arrested sooner than later in the larger interest of growth of the discipline. It is also necessary to invent new healthy metaphors not only for archaeology but also for all branches of social sciences

Footnotes

1. Feyerabend (1975) says that "the idea that science can and should be run according to fixed an universal rules is both unrealistic and pernicious. It is unrealistic for it takes too simple a view of the talents of man and of the circumstances, which encourage or cause their development and it is pernicious, for the attempt to enforce the rules is bound to increase our professional qualifications at the expense of our humanity. In addition, the idea is detrimental to science for it neglects the complex physical and historical conditions which influences scientific change. It makes our science less adaptive and more dogmatic (F.1975 I 295).
2. Hodder 1982, trigger 1989, Kohl 1993
3. Clarke's concern
4. Chattopadhyaya (1993)
5. By Aristotle

6. Tilley (1989)
7. Bahn (1991)
8. Mex Black (1962)

References

1. Binford, L.R. (1962) Archaeology as Anthropology.
2. Black. M. (1982) Models and Metaphors.
3. Clarke, D.L. (1972) Models and Paradigms in Contemporary Archaeology.
4. Graves, P. (1991) New Models and Metaphors for Neanderthal Debate, Current Anthropology, p. 513-41.
5. Tilley, C. (1989) Archaeology as Socio-political Action in the Present.
6. Trigger, B.G. (1989) A History of Archaeological Thought.
7. Watson, P. (1971) Explanation in Archaeology – A Scientific Approach.

* *Curator, Government Museum, Krishnagiri - 635 001.*

EDUCATION

Distribution of Prizes to Lawn Art Competition Winners, Government Museum, Vellore

Taxidermy Course for Students at A.V.C. College Mayiladuthurai by Government Museum, Chennai

Training - Folk Art
Government Museum, Chennai

Distribution of Certificates to the Participants of the Museology Course, Government Museum, Ooty

Training in Estampage,
Government Museum, Madurai

Tanjore Painting Workshop,
Government Museum, Madurai

Out-reach Programmes in the Government Museum, Vellore

** M. Gandhi*

Introduction

Museum is not a storehouse of art and curious objects but a place, which imparts knowledge and entertains people. In India more than 700 museums have been now functioning[1]. Often new museums are planned to be organised such as cine museum[2] and recently Srinivasa Ramanujan Museum was inaugurated in Kumbakonam[3] to cater a particular field of knowledge to the public in general and particularly to those in the fields. Curators' main functions are collection of objects, registration, display and conducting outreach programmes under the head of educational activities. Even though specimens are well and suitably displayed in the galleries, people should visit, to learn and enjoy the informal higher educational institution-museum. Therefore T. K. Biswas says, " without being visited a museum turns into a godown"[4] . There is a Tamil saying if a *kolam* (*rangoli*) is put in the morning in a house should be affaced by the evening by playing children of the house, otherwise no use of a house without children. Hence a museum should be visited by all kinds of people. Shakespeare says in his "As you like it" a best wine needs publicity and in such a way a museum also is in need of wide publicity to be visited by people. To attract visitors of all kinds to a museum, outreach programmes of a museum are the best tools. N. R. Banerjee tells, "The success or failure of the institution depends upon his (Curator's) academic background, power of imagination, capacity for hard work, dedication to his duties, a high sense of responsibility, tact and capacity for man management and of course, his museological knowledge"[5]. Therefore, the Curator acts as the main person in a museum.

The Government Museum, Vellore functions as one of the district museums under the control of the Department of Museums, Government of Tamil Nadu. The type of programmes attracts

visitors to the museum. Ways and means should be undertaken by the Curator to lure children and the public to visit museum and the visitors have to become museum minded. Education of students is fulfilled with their visit to museums. Hence the Curator of the Government Museum, Vellore has taken a series of activities under outreach programmes for all types of visitors. H. Sarkar has opinend that, "activities have any lasting effect on the minds of those for whom the programmes are intended."[5] The Curator of the Government Museum, Vellore made ever lasting effects on the minds of trainees of the courses conducted.

Types of Outreach Programmes

The following programmes are conducted in the museum :

1. Slide shows
2. Film shows
3. Lectures
4. Training programmes
5. Exhibitions and
6. Publication of handouts.

Slide Shows

Whenever group of students from schools or colleges or any other educational institutions visit the museums, they are made seated in the museum and slides pertaining to museums are shown with commentry. Slides of museums in the U. K., Paris and India are shown to Rotary Clubs and other Social organisations in the Vellore town.

Flim Shows

Films of cultural, historic and natural sciences were screened to the students who visit the museum.

Lectures

The Curator delivers lectures to college students and teacher trainees of the Government College of Education, Vellore every year, with slides on museums to give information on museums. Through these lectures museum mindedness is inculeated in the minds of the audience

Training

Under the head training, the Government Museum, Vellore imparts six varieties of training to students of schools and colleges. They are as follows:

Summer Art Training

During the summer holidays art training is given to school students to gain knowledge for furthering their education. This programme is conducted for a week at a stretch. In a summer 100 pupils participats in the training. At the end of the course, participation certificates are issued to the participants.

Lawn Painting Training

From July 1999 onwards, this museum is actively training students of middle schools from Vellore town as well as the surrounding areas in batches in collaboration with the North Arcot Artists' Association, Vellore. In an academic year three batches of students are trained. In each batch nearly 100 students get training in basic art such as line drawing, enlarging picture, abstract painting, model drawing, moulding and clay modelling. So far training has been given every Sunday for 13 batches for 12 weeks.

Training in Photography

Photography becomes part and parcel of a museum function. Museum trains unemployed youth to become freelance photographers. The Rotary Club of Vellore South had collaborated with this museum in providing training in phototgraphy.

Capsule Training in Taxidermy

The Government Museum at Vellore is a multipurpose museum. Therefore, it has taken interest to train M.Sc. Zoology students from colleges in and around Vellore. These students are familiansed with knowledge on taxidermy which is also a part of their curriculum,

Capsule Training in Learning Epigraphy, Iconography and Temple Architecture

Knowledge on the sources of materials training enhanced the knowledge to the history students. Post graduate students in history from the colleges of the Vellore district had participated in the training.

Screen Printing Training

Unemployed youth participated in this programme which helped them to stand on their own legs through self employment in screen printing.

Exhibitions

Art works, which were produced by the participating students in the art competitions, were displayed as exhibitions in the museum itself. Art works of eminent artists of the town like Kalaichemmal, B. Muniratham and artist, V. N. Shanmugam were exhibited in the museum. These functions had stimulated junior artists to improve their efficiency in fine arts.

Every year Numismatic and philatelic exhibitions are arranged for the public and pupils. In these exhibitions numismatists and philatelists enthusiastically participated and showed their collections. Photographic exhibition of Rock Art in the Vellore district, Monuments of India, Sanchi Stupa and its environs as well as Jodhpur fort and museum were on show.

Publication of Handouts

The Curator had printed 10,000 copies of handouts on the History of Museums in Tamil Nadu which had been distributed free of cost in the Government Museums at Vellore and Cuddalore. At the time of the Exhibtion of Rock Art in the Vellore district 1,000 copies of handout in Tamil were printed. 10,000 copies of picture cards of Tirthankara from Walajahpet were printed and distributed to the visitors of the museum at Vellore.

In such ways the Government Museum at Vellore has taken interest and formulated out reach programmes. This museum now stands first in the entrance fee collection in the State of Tamil Nadu among the district museums.

References

1. Anupama Bhatnagar (1999) Museum, Museology and New Museology, Sundeep Prakashan, New Delhi.
2. *Thinamani* Tamil Daily, Chennai, 20th of December, 2003.
3. *The Hindu* Daily, Chennai, 13th, 14th and 22nd of December, 2003.
4. Biswas.T. K. (1966) Museum and Education, New Era International (P) Ltd., Madras, 1996.
5. N. R. Banerjee., (1990) *Museum and Cultural Heritage of India*, Agamkala Prakashan, Delhi, 1990.
6. H. Sarkar (1981) Museums and Protection of Monuments *and Antiquities in India*, Sundeep Prakashan, Delhi (1981).

* *Curator, Government Museum, Vellore - 632 004.*

Introduction of Training Programmes in Different Faculties of Museum to the Students' Community

1) Training to identify icons, coins, stamps and conservation of cultural objects.
2) Training in astronomy and telescopes.
3) Training in preservation of Biological specimens.
4) Training in conservation of paintings.

Extension Service

As part of the Extension Activity, Goverment Museum extended its hands in conserving the zoological specimens collected during 19th Century in Madras Christian College and Central School Museum in Srihankotta, A.V.C. College Museum, Mayiladuthurai, then articulating skeletons of Dugong and Dolphin in Regional Centre, Zoological Survey of India, articulating the skeletons of Dugong and Dolphin in Forest Department Museum in Jam Nagar in Gujarat, articulating a rare and unique skeleton of Sperm whale in Ongole.

Therefore, the objects in the museums are the source for study and research and also a source of pleasure and delight, joy, knowledge and experience drawn from all parts of the world. The new methods develop exciting atmosphere to stimulate the interest and arouse the curiosities of the student community.

* *Curator, Zoology Section, Government Museum, Chennai - 600 008.*

Present Trends in Museum Education in Government Museum, Chennai

* *M. Mohan*

Introduction

Museology is an applied science closely connected with the collection of artefacts, interpretation, conservation, exhibition, study and research of the multifarious type of museum objects. Theories and methods of communication, education, exhibition, architecture and the effective use of the principles of museum management are its other components.

A museum exhibits the cultural, environmental, scientific and art treasures to the visitor in order to make them aware of our own past heritage. A museum documents and preserves the relics of the past, interprets them, conducts research and publishes the findings to make the society conscious of the glory of the bygone era besides exhibiting them. Museums are the places where we find the source, visual and additive dimensions of human existence of previous era. The mission of the museum is the preservation of the objects for posterity. Present trend of a museum is to educate through the objects besides conducting programmes related to objects.

Educational Activities of the Government Museum, Chennai

The Government Museum, Chennai is regularly organising educational programmes like popular lectures, endowment lectures, short-term

in-service courses for the benefit of students, teachers, officials and the interested general public, providing facilities for research studies etc. The educational activities of this museum are as follows:

1. Short-term Courses on Taxidermy, Preservation of Biological Specimens, The Importance of Geological Specimens, Care of Museum Objects, Course on Treasure-trove Objects, Care of Archival Objects, Care of Temple Antiquities, Conservation of Cultural Heritage, Care of Art Objects etc.
2. Conducting seminars on various subjects of the museum.
3. Art workshops on Traditional and Folk Paintings of different States of India.
4. Giving Radio-talks, TV talks etc.
5. Delivering special lectures in schools and colleges in order to familiarise the subjects of the museum among students.
6. Conducting research leading to Ph.D. Degree in conservation under the University of Madras.
7. Providing guide service to students from schools and colleges and special groups on request.
8. Loaning of objects to schools for organising exhibitions.

Students, scholars, police officials, officials of museums, Executive Officers of the Hindu Religious and Charitable Endowments Department, Archivists, engineers of the Southern Railway and the general public have benefited through these programmes.

Loan Services

The Government Museum, Chennai offers loan of museum objects to many educational institutions for conducting exhibitions. The exhibition thus arranged by them in their schools make the students to understand through the object relevant to their syllabus.

Gallery Tours

The Government Museum, Chennai provides Gallery Tours on request for the school children, teachers, Tourist Guides and the visiting public through the Guides and Assistant Curators at times

the Curators. The respective Curator delivers Gallery Talk to the special groups or VIPs.

Publication

One remarkable achievement of the Chennai Museum is the reprinting of very valuable old publications of the museum. This is an outstanding task and rededication of service to the scholarly world for which the Chennai Museum has always cared deeply. The Chennai Museum frequently on exchange basis receives a steady stream of excellent periodicals and books published by the museums from home and abroad. The Chennai Museum also sends its publication to other leading institutions depending upon the exchange agreement. The Chennai Museum publishes various type of materials other than Museum Bulletins, and Guidebooks. They include administrative reports, endowment lectures, Museum's Journal, monographs, brochures etc. These publications bringout ample information to research scholars.

The Chennai Museum in the Recent Years

Museums have changed from treasure houses to educational centres. In view of this, the Government Museum, Chennai has expanded its educational programmes during the recent years. Special exhibitions on recent additions, endowment lectures, series of popular monthly lectures, special training in fine arts etc. The Chennai Museum regularly offers facilities to other cultural institutions, officials and non-officials, to organise exhibitions, workshops and seminars etc.

Conducting exhibitions in other institutions and private organisations has taken a leap. In 2003, The National Museum of Mankind, Bhopal conducted a Science Exhibition on Sacred Groves of India form April 25th to May 14th 2003 in collaboration with the Government

Museum, Chennai. The aim of this exhibition was to interact with local organisations and people to learn more on sacred groves of the country and to strengthen the variety of sacred groves related to local management practices and knowledge systems.

Popular Lectures

Popular lecture was revived in the year 1999. In the Eighties only one endowment lecture in the name of Professor T. Balakrishnan Nayar was instituted and lectures in archaeology, anthropology and museology were conducted in the Government Museum, Chennai. The Chennai Museum encourages the establishment of endowments funds. Presently endowments have been instituted in the museum with the co-operation of organisations. The National Museum, New Delhi jointly organised Mr. C. Sivaramamurti Memorial Lectures in collaboration with this museum oo 22nd February 2003 at the Chennai Museum.

Workshops

Another museum trend in this aspect is the conduct of art workshops for the benefit of art lovers and students. Art awakens new insight and understanding among the children and old alike. Workshop is one of the means of spreading awareness of a subject of study through interaction with experts in the field. The Education Section of the Chennai Museum has conducted several art workshops. To bring Indian folk painting tradition into the public milieu, workshops on visual art series had been organised by Government Museum, Chennai in collaboration with the National Folklore Support Centre, Chennai. Art worksbops related to traditional painting and folklore painting such as, Thanjavur, Kalamkari, Madhubani, Warli, Pattachitra, Kisbangarb miniature, Bastar, Pithora, Pata

Child Art Competition

paintings etc., were conducted in the Government Museum, Chennai. Ten art workshops connected to traditional and folklore paintings from different States of India had been organised in the Government museum, Chennai during 2000 – 2001. A workshop on Rajasthani Painting was conducted in collaboration with National Museum of Mankind, Bhopal in the year 2002. The aim of the educational programmes is to give training to teachers, art lovers, connoisseurs and students to develop their talent in the field of Fine Arts.

Museographical Training

This museum conducts museographical training like Refresher Course on Care of Museum Objects, the Importance of Geological Specimens, Preservation of Biological Specimens for those who are working in the museums and related institutions including students and teachers. Research students and scholars are permitted to do research and internship in the Chemical Conservation and Research Laboratory.

Computer Application

This museum provides data based information to the users. Another museum trend is the use of Information Technolgy for the museum development. Computers play an important role in providing data to the users. In keeping up with the latest technology, e-mail is used to have fast correspondence with the users.

Website

The Government Museum, Chennai launched the website on line on 18-12-2001. It uses an Optical Carrier Band – III 9 (OCB-3) server based in USA, one of the fastest in the world. It is one of the largest websites in the museum world. It gives all information about this museum including the department's details and gallery map. The Updating of the website of Chennai Museum has been continuing every fortnight to give updated information and details on recent additions, museum events, latest publication, and educational programmes to the users.

Audio -Visual Presentation

An audio-visual presentation about the museum objects in the galleries enhances interaction with the exhibits for the visitors have been installed in the first floor of the Bronze Gallery building. This museum in the past and present, videos of the lost wax process i.e traditional bronze making, the modern investment casting process, are presented to the visitors. His Excellency, the President of India, while delivering the commemoration address at the function to mark the completion of 151 years of the Government Museum, Chennai said, that "we can even make it more interactive by customizing it in real time for any user who is willing to pay. For example we can give the camera to a human guide at the museum. The pictures will be relayed to a viewer's home through the Internet. Looking at the picture, the user will direct the guide to go closer to some pictures or objects that he likes to see more or ask questions which the guide will answer. We need such innovative techniques to make our museum reach everyone, just in time and are of any place. Then we will make our culture and heritage shareable and make them bring joy to everyone. The museum should leave a permanent imprint in the minds of the visitors. The Chennai Museum will certainly adhere to the suggestions given by the President of India and make them into reality.

Conclusion

During the last two decades there is a tremendous change in the development of museums. But the perception of the people has not yet changed. The Chennai Museum has recently renovated some of the museum buildings and refurbished many galleries with latest Octonorm type showcases in an attractive manner. Presently the Chennai Museum utilises computers for its development. Computers are used in documenting museum objects.

The present development in Chennai Museum will certainly change the perception of the visiting public that museums are more important institutions in respect of preserving our cultural wealth for posterity.

References

1. Centenary Souvenir (1851- 1951) Government Museum, (Madras), Chennai.
2. John M.A. Thompson (1984) Manual of Curatorship, London.
3. Satyamurti, S.T (1998) Handbook of the Government Museum, Chennai.
4. Souvenir, Government Museum, Chennai to mark the 150th yea· Celebrations of the Government Museum, Chennai. (19-6-2002

** Curator, Education Section, Government Museum, Chennai - 600 008.*

Extra-curricular Activities - The Need for a Successful Museum

** P. Sam Sathiaraj*

Introduction

The basic functions of a museum like the collection, preservation and interpretation have been talked in the museology circle. But there is a changing trend in them. The role of the museum in education and public relation are viewed in its broader sense now. Museums are rather a source of intellectual stimulation and entertainment. Special exhibitions, travelling exhibitions, guided tours, school visits and loan services to schools, training courses to teachers, lectures through audio-visual aids and publications are the various means of museum education. The success of these educational programmes largely depends on the involvement of the participants and the organisers. When a museum conducts all these educational programmes and extracurricular activities, then that museum is a successful museum.

The Role of Extra-curricular Activities in Museums

Generally museum conducts activities in its own orbit with clearly defined duties. In order to survive and secure the appreciation of the community, a museum must involve in some form of the educational activities. Museums have attained a recognised place in our society and have been accepted as a supplementary educational institution to impart education through objects of the past and present. Society has recognised museums as a place with visual aids. Most of our museums with purposefully tailored programmes motivate the casual visitors to derive the maximum benefit out of their visit to the museums.

Apart from the usual functions and the educational programmes museums are involved in other ancillary services like the arts and

crafts demonstrations and workshops, film shows, special exhibitions of arts and crafts, special training camps, summer training camps in historic talents, concerts etc. These are considered to be extra-curricular activities of a museum. These prove helpful in winning the support of the public and the community. Again these are helpful in popularising the museum. Museums actually offer greater opportunities to persons of all age groups. Whenever a museum is popularised, the educational activities are easily implemented and finally the ultimate goal of a museum is achieved very easily. Museum is the only institution, which can make a simultaneous use of all the experiences – sight, hearing, touch, taste and smell. When schools given importance to curricular subjects, museums choose broad themes, utilise multi-disciplinary approach and employ all the means at their disposal to present a holistic view of any aspect of knowledge. A participatory approach to museum can be best resolved by means of its extracurricular activities.

Activities and Events in Some European Museums

In the West, museums and schools are so closely associated with each other that in the absence of the one, the other cannot be thought of as a good institution. Some European museums like the Victoria and Albert Museum and The British Museum in the U.K. are very popular because of their educational activities and other extra-curricular activities. The Educational Departments of these museums are very active and they conduct programmes for school children, programmes for hearing impaired and visually handicapped children. They have a varied range of programmes like programmes for school children, adults, family groups and community groups from around the country to offer a chance to explore its collection. The education department of the V&A Museum plans for a yearlong programme well in advance. It arranges programmes for South Asian, Chinese, African and Caribbean communities. If also arranges events like music, dance performances, demonstration of Indian crafts, courses and workshops such as jewellery making and textile techniques, inspired by the South Asian collections. These programmes are

conducted at the premises of the V&A Museum and at its community centres. They have many outreach programmes also. Some of its events are conducted in collaboration with venues in London and throughout Britain. A number of travelling exhibitions co-ordinated by the V&A Museum enable communities throughout Britain to celebrate the works created by community groups through projects at the V&A.

The V&A Museum has Sacred Spaces Touring Exhibition. 'Sacred Spaces' is an exhibition of and by faith communities exploring through photography the links between sacred objects in the V&A Museum and sacred spaces within different faith communities in Britain today. The faiths include Judaism, Christianity, Islam, Hinduism, Jainism, Buddhism, Sikhism and secular.

The V&A presents an internationally renowned programme of temporary exhibitions. The temporary exhibitions complement the Museum's outstanding permanent collection. They have so many sample projects like *Diwali* celebrations supported by gallery talks and festivals of other countries with music, dance programmes and demonstrations. The programmes of the community groups provide opportunities to explore and gain inspiration from the V&A collection and participate in the range of activities.

The education department of The British Museum, London conducts events for family groups. This provides materials, activities and events for mixed generation groups during school holidays and occasional weekends during term time. The British Museum provides 'Explorer's packs' for teachers. The Explorer pack will provide them with all the materials they need for a lively and challenging teaching sessions in the museum. Explorer pack of 45 minutes duration costs 30 pounds per group. The education department of the British Museum offers a range of events for the general public who are interested in deepening their understanding of an area of the collection or the subject of an exhibition.

This department also offers a range of learning experience for everyone whatever the age or level of interest. They have a calendar of events. Workshops are conducted in the field of music, dance, drama and visual arts for children. They celebrate the National Science Week. University students are also benefited from their practical workshops. All these activities play major role in the success of the British Museum.

Events and Activities in Some Museums in the United States of America

The Smithsonian Museums in the Washington D.C., the World's largest museum complex conducts hundreds of educational and cultural activities each and every month. It has family programmes, holiday shopping festivals where one can view exhibitions and enjoy like music. It has Asian American programmes in which they celebrate the contributions to American Society made by Korean Americans. A rich variety of percussive dance programmes are conducted in which the influence of various cultures of this country is performed. In honour of their rich and diverse cultural heritage, the Smithsonian celebrates five heritage months each year with films, performances, exhibitions, family programmes and more. Most of the Smithsonian museums offer free highlight tours and scheduled exhibitions and demonstrations. The Smithsonian National Museum of Natural History offers a calendar of events for every month well in advance. It conducts film festivals also. All these programmes are conducted by its educational department on a first come first served basis. The students are benefited from hands-on activities offered by volunteers in permanent and temporary exhibitions. Families enjoy special weekend activities such as the Annual Family Science Day and festivities.

The affiliated museums of the Smithsonian create vital relationship with communities across the U.S. by working through local museums and educational institutions. The travelling exhibition shares the wealth of the Smithsonian collections, research and exhibitions with

audiences across the world. The Freer and Sackler Galleries also conduct a varied range of programmes including exhibitions, tours, lectures, workshops and family programmes. The education department offers a wide variety of programmes designed to foster better understanding of Asian art and culture.

The Carnegie Museum of Art at Pittsburgh conducts programmes like art studio classes in drawing, painting, clay modelling, ceramics, adult art history classes, family classes, summer art camps and more. The Carnegie Museum of Natural History conducts overnight adventures. They also conduct special programmes like senior express programmes, a creative programme designed with senior citizens. They also have interschool programmes and outreach programmes like the 'museum on the move'.

In the Los Angeles County Museum of Natural History events like overnight adventures, trekking, fossil hunting etc., are arranged with advanced reservations. They have different programmes for summer, winter and spring. Admission fee is charged for these events.

Extra-curricular Activities in Indian Museums

In the West, museums are exploited to the fullest for lasting education both in the field of culture and science. However, in India consciousness for this role on museum started from the time of Dr. Grace Morley in the sixties of 20th Century. We still lack the close relationship between schools and museums. The National Children's Museum, New Delhi conducts enormous programmes for children. It plays significant role in the field of education. Museum techniques are taught here. The National Museum and the National Museum of Natural History in New Delhi also perform varied range of programmes. The National Museum Institute is a deemed university. The Indian Museum, Kolkata, the earliest museum in the Asia Pacific region conducts Interstate and International exhibitions, video shows and film shows. The museum on wheels visits doorsteps of rural people. A mobile conservation laboratory

also functions there. In-service training programmes for museum personnel and week-end short-term courses are also conducted for art lovers.

In the South, the Salar Jung Museum, Hydrebad stands as a good example for its multifarious activities. Similarly Government Museum, Chennai plays a significant role in conducting programmes like courses on Care of Museum Objects, Preservation of Biological Specimens and various programmes for the school children.

Extra-curricular Activities in the Government Museum, Madurai

Government Museum, Madurai is one among the 20 district museums under the Department of Museums in Tamilnadu. It was started in the year 1981. It is a multi-disciplinary museum and it has a good collection of stone sculptures, bronze icons, musical instruments, paintings, biological specimens etc. Apart from the usual functions of a museum, Madurai Museum conducts a wide range of programmes for school children, college students, adults and housewives. The activities of Madurai Museum can be classified broadly in to educational activities oriented towards art and culture.

Educational Activities

Here programmes like the popular lectures, gallery talks, seminars, training courses like the taxidermy training course, training camps on epigraphy and chemical conservation, quiz programmes, competitions and celebrations like the museum week and children's day are included. The taxidermy-training course is conducted for under-graduate and post-graduate college students who study zoology as their major subject. The epigraphy training camp is conducted for college students who study history as their major subject and the chemical conservation camp is arranged for college students having chemistry as their major subject. Specialists from the Department of State Archaeology and Museums are invited to give this training. In the epigraphy training camps students are taken on

tour to near to the town and trained to read inscriptions apart from their training at the museum campus. The competitions like painting competition, quiz programmes and other competitions like touch and feel competitions for the blind, essay writing and elocution competitions are conducted for the school children and these programmes are mostly associated with events like the Children's Day and Museum Week celebrations. Financially these educational programmes are partly supported by the department and partly by the sponsoring institutions.

Extra-curricular Activities in the Promotion of Arts and Culture

Apart from the above educational activities, Madurai Museum conducts regular training camps and special exhibitions, which promote arts and culture. These include training in Thanjavur paintings, batik art, artificial flower making, ceramic modelling and screen-printing. These programmes are much utilised by the college students, the unemployed youth and housewives. The participants share the cost of these training programmes. These training programmes gain appreciation from the public since they are helpful in earning money and create an opportunity for self-employment. Special exhibitions like the Thanjavur paintings, batik art, oil paintings, watercolour works, child art and handicrafts are also part of the extra-curricular activities of the Madurai Museum. The painting exhibitions are of one-man shows or group shows. Apart from these, this museum conducts a month-long summer camp in histrionic talents. These include drawing and painting, music, dance like *bharatanatyam* and folk dances, martial arts like *karate, silampam* and *varmakkalai*, photography, doll-making etc. Participants comprise school and college students and housewives.

All the above activities are very much useful for the children and

adults of all age groups. Madurai Museum is being popularised by means of these activities. In the summer camps more than thousand children participate every year and this gives an excellent opportunity to bring out the hidden potentials of the young. This museum is made vibrant by these activities. Many artists and artisans had their glimpses of their past experience in this museum.

Conclusion

A museum should get its support from the public. Now-a-days most of the multidisciplinary museums especially the district museums are similar in their collection and display. They house objects of various disciplines. They normally reveal the history, art and culture of the bye-gone era of the region. But what is the contribution of them to the society or community? A scholar rightly says that "Museums are a service run by people, for people and its continued existence can only be justified in these terms". So the popularisation of a museum is best achieved only through its extra curricular activities or ancillary services. The Western museums are very much popular and successful because of their educational activities and events. So the need of the time is the extra-curricular activities in museums by which they can reach the society very easily. When it reaches the society properly it attains ultimate goal of the museum.

Reference

1. *Journal of Indian Museums*, Vol. XLIII, Museum Association of India, New Delhi, 1987.
2. Dwivedi, V.P. & Pant, G.N. (Editors) (1980) *Museums and Museology: New Horizons*, Agam Kala Prakashan, Delhi.
3. Nigam, M.L. (1985) Fundamentals of Museology, Deva Publications, Hyderabad.
4. Sarkar, H. (1981) Museums and Protection of Monuments and Antiquities in India, Sundeep Prakashan, Delhi.
5. Brochures from The British Museum, London and Indian Museum, Kolkata.
6. Information from the Websites.

* *Curator, Government Museum, Madurai - 625 020.*

Corporation Museum, Visakhapatnam - Present Status and Development Plans

** Prof. E.V. Gangadharam*

The combined genius of an IAS Officer (Municipal Commissioner) and the First Citizen resulted in a pioneering (and bold) decision to establish a museum (long overdue) in Visakhapatnam in 1991. The royal and *zamindari* families and established institutions responded magnificently to the appeal and a 150 year old "Dutch (?) Bungalow" was renovated, modernised and filled with historic and unique artefacts.

The museum has eleven rooms, 12 flush-mounted wall cabinets, 25 floor-standing wooden showcases and a floor area of about 2,000 sq.m. maintained by the Municipal Corporation and managed by a Committee of donors, city elders, academicians, retired professionals and volunteers.

The "core exhibits" consist of items with which the museum was established while the modern items include nationally important collections and *memorabilia* gathered by the author with the help and co-operation of the Museum Committee and the support of the eleven Commissioners from the inception of the museum till date.

Amongst the more notable exhibits are: a unique ivory (white) and turtle-shell (black) chess table with exquisitely painted ivory fretwork made in *Visakhapatnam* in 1920 owned by the then municipality; a floor-desk used by the Father of the Nation, Mahatma Gandhi, during his visit in 1930's; the preserved coconut broken by the well-beloved first Prime Minister Jawaharlal Nehru while launching the first India-built ship SS JALA USHA at Scindia Shipyard of Vizagapatnam; the inscribed gold *Gandapenderam* (anklet) and the

British-awarded *Maha Mahopadhyaya* in signia of Poet Laureate Sripada Krishnamurthi Sastri of 1950's.

1922 photo archives and bronze busts of early administrators of Visakhapatnam Port, ship models from Hindustan shipyard, the "fin", complete with periscope, of first submarine KALVARI of Indian Navy, a fragment of Pakistani submarine PNS GHAZI, a memento of Bangladesh War of 1971 reflect maritime history of India.

A collection of full-length oil-on-canvas portraits of royal families, instruments from an astronomical observatory of 1900's in the city and 1922 table porcelain made in Czechoslovakia carrying the crest of a royal family with inscription in Telugu and an excellent collection of spears, swords, guns, helmets, chain-mail and full-suit armour are symbols of warfare of the past.

The *Adivi Bapiraju* Gallery has the largest collection of paintings of the multifaceted genius-artist of Andhra of 1930's. The museum has got exquisite sculptures, inscriptions and coins from Andhra Pradesh State Department of Archaeology. The corporation permitted the Department to have its own building in the museum premises recently, into which it will move.

Modern scientific items acquired by the author include rock from Antarctica, fossils including dinosaur egg from Tamil Nadu, remote sensing imagery and material relating to USA Apollo Lunar Explorations and Indian Marine Arhcaeology with which the author is involved.

While the location on the popular beach road is a boon to the museum in terms of easy access and opportunity for citizens and tourists, the salt spray-laden air is the bane of the Curator. Maintenance of the building is a considerable burden to the Corporation, while public activities are conducted by the Museum Committee mostly with funds

raised by it. A Friends of the Museum Society has been formed and residents and N.R.I. Vizagites are beginning to respond.

In spite of periodic change of Commissioners and Mayors, the Museum Committee is fortunate to enjoy their support and co-operation. The present Commissioner (an IAS officer) is very keen to improve standards and develop the museum to national level.

Bodies catering to museology such as the Museums Association of India are requested to consider providing the services of professional museologists to make diagnostic studies and render practical advise to fledgeling museums like ours.

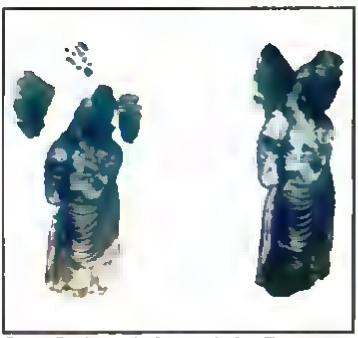
* *Honorary Curator, Corporation Museum, Visakhapatnam, Andhra Pradesh.*

CONSERVATION

Damaged Painting

Restored Painting

A Bronze Image and its Radiograph



Stone Sculpture before and after Restoration

Sliding Storage for Paintings

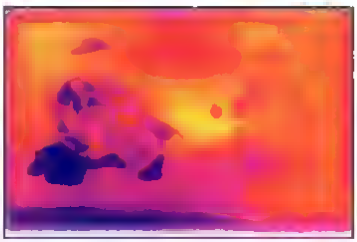
Laser Cleaning of a Marble Sculpture

One in All Environmental Monitor

Ordinary Photograph and Fringe Pattern of a Bronze Image

Nitrogen Fumigation Chamber

A Tanjore Painting under Normal Light



The Tanjore Painting under Infra Red Light

Current Trends in the Analytical Techniques in Museums

** Divya Durga Prasad, Y.A. and*
*** Dr. V. Jeyaraj*

Introduction

The term museum, like most words, has changed in meaning with time. It conveys concepts not only of preserving the material evidence of the human and natural world but also of a major force in interpreting these things. The idea is perceived positively and the availability of museums as a public facility is considered desirable in developed and developing countries alike. For countries with a significant past like ours museums may seem to have a vital cultural and even economic role to play. Museums today are to quote part of the International Council of Museums definition of a museum in the service of society and of its developments.

This paper is based on the observations of the principal author during her recent visit to the U.S.A. and the discussions with many museum professionals at various museums and research institutions and the practice in Chennai Museum. Some of the current trends in analytical aspects in USA and India will be discussed briefly in this paper.

Need for Analysis of Artefacts

Preventive conservation is the key word in conservation today. Conservation is the process by which the life expectancy of artefacts is increased. In order to implement proper preventive conservation it is necessary to have a thorough knowledge of the material i.e. the components of the artefact, the materials used to construct the storage, display structures are of prime importance.

Material science helps the conservator in two ways.

1. It provides the conservator the data regarding the condition and the materials used in the object. It helps to decide that method or materials may be safely used in the restoration, display, storage etc.

2. It provides sufficient elues for the object's authenticity. With a cumulative growth of knowledge of the materials used can be obtained by scientific analysis and the results compared with known ones to decide authenticity.

* Phenomenal time and money are being spent on material analysis.
* These analytical techniques also aid in authentication.
* Tests like Oddy's test are carried out to find suitable material for display structures.
* However in India the conservator depends solely on his experience.
* Both destructive and non-destructive analytical techniques will be discussed, though the current trends shifts towards NDA techniques.

Ultraviolet/Visible Spectroscopy (UV/VIS)

Ultraviolet/Visible Spectroscopy (UV/VIS) is used in the examination of organic colourants and dyestuffs. With UV/VIS, a beam of light passes through a quartz cell containing the sample liquid. The sample selectively absorbs some wavelengths; the remainder passes through and strikes the detector. The resulting pattern of light is called a spectrum and is characteristic of the components of the sample.

This technique is used to analyse organic compounds and can detect samples in the parts-per-million range.

Application

UV/VIS studies of Andean dyes and colourants have yielded new information about trade and activities during the era and in the region where they were used.

UV/VIS has also been used to investigate and identify dyestuffs in tspestries organic colourants on sarcophagi.

X-ray Fluorescence Spectroscopy (XRF) – NDA Technique

X-ray Fluorescence Spectroscopy (XRF) is one of the most widely used techniques for non-destructive analysis of bulk samples. Samples may be analysed as powders or solids without solution preparation. The XRF unit is mounted on a movable chassis that allows the instrument to examine objects in situ.

In XRF, the sample is placed in a beam of high-energy photons produced by an X-ray tube. Some of the inner-shell electrons of the sample's constituent elements absorb enough energy to be ejected from the atom. Outer-shell electrons fill the vacancies left and emit excess energies as fluorescent x-rays. The characteristic peaks identify the elements and the height of the peaks can determine the quantity of each material present. XRF cannot be suited to analyse hydrogen, helium and beryllium and detection limits for other light elements are poor.

Applications

Many different works of art are usefully examined, including paintings, bronzes, sculptures and polychrome surfaces by XRF Analyser.

XRF Can Identify

* Pigments in areas of a painting without removing a sample;
* Major and minor constituents on metallic artefacts;
* Elemental composition in early photographs, costumes, and prints.

X-ray Diffractometry (XRD)

X-ray diffractometry, generally used on pure materials and simple mixtures, can identify specific compounds on the basis of their crystal structure. In XRD, an aggregate of small crystal fragments, such as a powder, is irradiated with a monochromatic beam of X-rays. The beam is diffracted at angles determined by the planes of atoms in the crystals. The diffracted beams are recorded on film or detectors. The intensity and spacing of these diffracted beams are unique to each type of crystalline material and can be identified by comparison to a published atlas.

Applications

XRD is used widely in determining deterioration and alteration products and to investigate previous restorations.

In addition, XRF is useful in

* Identification of corrosion products on metal and pigments and grounds of paintings and polychrome sculptures;
* Characterisation of minerals in rocks, lime motors and earthen materials;
* Characterisation of gemstones and mineral constituents from rock art sites.

Infrared Spectroscopy (FTIR)

Infrared spectroscopy is used to examine and characterise organic and inorganic materials. The technique combines a microscope and infrared spectrometer. Data is produced in the form of a spectrum, with many bands that represent chemical bonding between two particular atoms or a group of atoms in a molecule. The spectrum is subsequently compared to a set of known reference materials for identification and interpretation.

As an analytical technique, FTIR has several advantages. It requires only a minute sample. It takes only minutes to analyse. And it will

work with most solids or liquids. FTIR is one of the first steps in material analysis to complement other techniques, such as gas chromatography, to achieve a better understanding of material composition.

Applications

Many materials traditionally used in fine art objects and architecture is identified with this technique. FTIR can be used in the analysis of modern paints (acrylic emulsions) and how cleaning affects them, as well as an examination of coatings on historic photographs.

In addition, FTIR is used for

* Analysis of various organic materials, such as binders, coatings and adhesives, both natural and synthetic;
* Characterization of inorganic minerals and pigments;
* Identification of organic pigments, colourants, and dyes;
* Analysis of composition and stratigraphy of paint cross-sections.

Gas Chromatography (GC) and GC/Mass Spectrometry (GC/MS)

In Gas Chromatography (GC), a gas or a vapourised sample is introduced and carried along by an inert carrier gas through a long, thin column where the sample components are separated. The components are flushed sequentially from the column and through a detector, and are identified by measuring the time from introduction to detection. The end of the GC column can be coupled directly to the mass spectrometer. The mass spectrometer breaks up constituents into molecular ions and other fragments, which then pass through an electric and/or magnetic field that separates them according to their mass-to-charge ratio. Thus, the GC separates the components within a compound while the MS identifies these components.

Applications

GC and GC/MS are suited to analyse organic materials. For conservators, this analytical technique can provide important

information on traditional artist's media, such as wax, tempera, oil, varnish, resins and gums.

Other applications include

* Identification of oils, resins, waxes and cholesterol in paint samples;
* Identification of unknown residues or contaminants in minute samples.
* Characterization of volatile compounds in solid materials.

Liquid Chromatography (LC) / Mass Spectrometry (MS) & High Performance Liquid Chromatography (HPLC)

Many artists' media are not volatile enough for gas chromatography or not stable enough to undergo the chemical processes that render them volatile. In these cases, LC/MS-MS combines the analytical power of mass spectrometry with a separation technique that can be used for these compounds.

Applications

More complex polymers, ethnographic objects, dyes from plant or insect origin, tree resins, and archaeological materials are investigated with LC/MS-MS. HPLC and LC/MS-MS have been used in:

* Quantitative analysis of indoor air pollutants in museum environments;
* Characterization of protein and carbohydrate binders in paint samples;
* Characterization of degradative changes in the molecular weight distribution of synthetic polymers.

Electron Probe Micro Analyser (EPMA)

The electron probe micro analyser can determine the elemental composition of extremely small samples of materials, such as metal, stone, ceramic, glass, and pigments. A narrow beam of electrons is scanned over the specimen to produce an image of the surface and a map of the spatial distribution of all elements in the periodic table

except hydrogen, helium and lithium. The microprobe is also used to quantitatively determine the chemical composition of very small spots (1 micron) on the sample surface, down to a limit of 50 parts per million.

Applications

The history of an object is often preserved in its outer skin, which can be investigated with the electron microprobe. Examples of the application of this technique include:

* Characterising weathered stone and glass surfaces;
* Analysing outdoor bronze patinas;
* Determining the composition of ancient silver and gold objects;
* Identifying rock art pigments.

Environmental Scanning Electron Microscopy (ESEM)

In a scanning electron microscope (SEM), the image of an object is formed using a beam of electrons rather than visible light. The SEM can magnify objects 100,000 times or more and produce detailed three-dimensional images. The environmental scanning electron microscope (ESEM) has the capabilities of the SEM and one critical advantage.

With the SEM, the sample must be in vacuum; the ESEM is designed to operate at much higher pressures, allowing imaging of uncoated samples and even liquids. The ESEM's internal environment can be changed to allow dynamic studies of phenomena sueh as corrosion and salt crystallisation. With the addition of time-lapse video, scientists can cycle temperature or humidity conditions and observe changes over time.

Applications

The ESEM has been useful in studying the wall paintings, and in examining the distribution of salts in mud plasters. The ESEM was used to investigate the corrosion layer on the tesserae, to study

methods of removing corrosion products, and to conduct failure analysis of several protective coatings tested for use on the glass mosaic.

Other uses include

* Determining the elemental composition of paint in cross-sections;
* Direct examination of swelling and shrinkage of clay in adobe;
* Dynamic study of corrosion on lead exposed to formaldehyde vapours;
* Salt crystallisation and its impact on building stone.

Polarising Light Microscopy

An optical microscope can do more than magnifying small objects. It can examine a subject's interaction with light, which can provide information about structure and characteristics of the sample. A polarising light microscope is equipped with a polarising light filter so that the light striking the sample is linearly polarised – that is, the light waves vibrate in one specific direction. Under polarised light, it is possible to investigate crystal structure. Polarised light microscopy is often the first technique used to analyse the structure of objects. It is an important instrument in authentication of paintings.

Applications

Polarised light microscopy is frequently used to identify paints and pigments in old master paintings and in murals. It is also used to examine ancient metallic samples and cross-sections of paint.

Thermo Analytical Methods

Thermal methods of analysis, chemical and physical changes that a material undergoes as it is heated. The changes measured include weight gain or loss, change in dimension or strength, and release or absorption of energy. The temperature at which these changes take place are characteristic of the material and its thermal history.

There are three different thermal techniques

* Differential Scanning Calorimetry (DSC) measures comparative changes in heat capacity.
* Thermogravimetry (TGA) measures weight changes during temperature transitions due to loss or gain of gases in the sample material.
* Thermo Mechanical Analysis (TMA) measures the penetration, expansion, contraction and extension of materials as a function of temperature.

Applications

TMA has been used to determine the firing temperature of ceramics, which can in turn reveal something about the technology used by potters. TGA has been used to investigate pollution adsorbents and to determine under what conditions they would re-release gases they have adsorbed, posing a risk to collections. DSC has been used to assess the effects of solvents on plastic conservation materials.

Conclusion

We would like to conclude by saying that in Government Museum, Chennai, IR photography is used to analyse the materials of paintings as this is a non-destructive analytical technique. Other NDA techniques are being studied to further analyse materials. Non-destructive are being followed in the Government Museum, Chennai to authenticate antiques.

References

1. Berger, R. (1970) Scientific Methods in Medieval Archaeology, California Unviersity Press, Berkeley.
2. Bishais, A. (Ed) (1974) Recent Advances in Sciences and Technology of Materials, Vol. 3, Plenum, New York.
3. Fleming, S.J. (1977) Authenticity in Art, Institute of Physics
4. Birks, L.S. (1960) X-ray Spectro Chemical Analysis, Wiley & Sons, New York.

5. Meore, D.M. Robert, C and Reynolds, J.R. (1989) X-ray Diffraction and the Identification and Analysis of Clay Minerals, Oxford University Press, INC, New York
6. Indicator, N and Bhisht, A.S. (1989) Examination of Metal from Historic Indian Textiles in the National Museums, New Delhi Using Scanning Electron Microscope Energy Dispersive X-ray Spectrometer, Conservation of Cultural Properties in India, Vol. 22, pp. 133-139.
7. Harinarayana, N. (1978) Problems in Scientific Examination of Metal Objects, Conservation of Cultural Property in India, Vol. pp 36-40.
8. Agrawal, O.P. etal (1989) Examination and Analysis of Wall Paintings – A Review of Technique, Consevation of Cultural Property in India, Vol. 22, pp. 142-154.
9. Jeyaraj, V. (2003) Care of Paintings, Government Museum, Chennai.
10. Jeyaraj, V. (1992) Correlation between Chemical Composition, Metallographic Structure and Corrosion Products of Metallic Antiquities, Ph.D. Thesis submitted to the University of Madras (un published).

* *Research Scholar.*

** *Curator, Chemical Conservation and Research Laboratory, Government Museum, Chennai –600 008.*

Environment for the Storage of Silk Sarees

*Bessie Cecil & ** Dr. V. Jeyaraj

Introduction

Indian silk is famous and is favoured throughout the world for its colour and decorative elements. Though the consistency of the fabric varies in comparison to the Italian and Chinese silk, the decorative variety makes it attractive in the market. India has diverse kinds of silks like the mulberry, *tussar, muga, endi* and *matkha* and traditional textile production has given us a legacy of historical textile like *pitnee* work of Kancheepuram, contrast border of Thribuvanam and Kumbakonam, tapestry kind of Paitani and Yeola, double *ikat* of Patan, *Meenakari* of Varanasi and embroidery of Kashmir, which have been prevalent for centuries. Understanding these fabrics and planning for a preservation of the existing samples is the aim of this paper.

The Silk Sarees

The unfolding yards of unstitched woven fabric, is a garment that represents the vacabulary of Indian womanhood and one which has survived centuries of history, foreign influx, social upheaval and the dictates of contemporary fashion synonymous with Western style of apparel. Making a classic statement for Indian fashion, the *saree* sustains the continuity of a tradition, the skills of weaving inherent in every part of the country, and stands testimony to a dynamic artform. The silk tradition is recorded in literary references that dates back to the first Century A.D. The texts of the *Sangam* classics such as *Silappadikaram* and *Mani Mekalai* (first to sixth Centuries A.D.) refer to the weaving of *pattusutram,* that is, of silk and the use of natural dyes. The paintings in the temples, the bronze icons and stone sculptures stand testimony to the existence of a sophisticated tradition of handloom silk weaving. Traditionally, every Indian family had their

weavers for *sarees* and clothes required for temple festivals, marriages and other auspicious ceremonies. The texture technique and design of the saree denote, the region of origin. The length of the *sarees* also vary from region to region silk indeed, is woven into the very fabric of the lives of the people, besides, its rich legacy forming the subject of study for textile scholars and historians the world over.

Storage

The daily care i.e. appropriate storage in general and display with reference to museums, should be given vital consideration. The materials chosen for a storage cupboards and boxes, are as important as the evaluation of the best kind of preservation and restoration to the silk textile. When it comes to storage, wood is given the preference because of its thermostatic property. Currently, in our research, concern about deforestation too is taken into consideration. So, on the available chemically treated and seasoned wood, in-depth research has been undertaken to study, the bacterial and fungal resistant capacity, sulphur content which can tarnish the metal thread, acidity and emission of gases like phenol are studied. Once these studies of the wood are carried out and when the wood is found safe, the following precautions have to be taken. Wooden storages/ containers should be coated with a water-proof polyurethane varnish to seal in wood acids. Even if sealed, however, the wood must never come in contact with the textile. So a barrier of archival tissue or a lining material may be kept between the wood and silk cloth or tissue wrapped around the cloth silk. Archival quality materials such as acid-free tissue, rolling tubes and boxes can be used to package silk for storage. While using lining fabric, it must be pre-washed to remove excess dyes, finishes and sizes. The best choice of fabrics would be 100% cotton. Linen is not an appropriate fabric because it easily absorbs moisture from the environment causing sagging and distortion. Wool also sags easily and silk or silk velvet are susceptible to insect attack. Usually, the red colour for lining material is thought of, as it is an insect repellant.

The storage closet, should have sufficient air circulation to prevent high humidity and mould growth. So periodic inspection of the collection in storage and fumigation with fumigants like naphthalene flakes and para-di-chlorobenzene is essential. Long exposure will fade the colour of textiles wrapped can always be stored with silk *sarees*. It is necessary to get the silk textiles regularly fumigated. Moisture eradication and control can be effectively implemented in the storage area by using silica gel in a tissue bag, which indicates harmful level of humidity by changing its colour from blue to pink. Attics and basements should be avoided as storage locations for silk *sarees* because the R.H. is usually very difficult to control. The best location for silk *sarees* would be cool and dry rooms.

Rolling a silk textile for storage is also an option, particularly for silk *sarees*. An archival tube is the best support. A plain cardboard tube can be a substitute provided it is buffered, by heavy layers of acid-free tissue. Brocaded silk textiles (those with metallic threads) or heavily embroidered and fragile textiles should be interleaved with tissue as they are rolled so as to protect the surface and they should be rolled in the direction of the pile to prevent distortion and crushing. If a textile has been lined then roll it with the lining face down. Some wrinkling will occur when the two fabrics are rolled together, but it is preferable for the wrinkling to occur on the lining than on the textile itself.

The silk material and the *zari* or the metal-thread is also analysed for the dyes, because the dyes used can cause damage to the textile, strength of the material, blend if any. And the *zari* used in the textile is tested for its varied ratio of metal composition which may also cause deterioration to the textile. Destructive method is very rarely used for textiles for analysis. Electron microscope, Infra Red Spectrometer, Energy Dispersed X-ray Fluorescence analyser and high powered microscope give us a lot of information like the structure and the strength of the yarn, the state of its sturdiness, the integration of the dye/pigment used and its effect on the yarn and

also the organic and inorganic microscopic particles tracked in the fabric and in the twist of the yarn of the fabric. These would lead us to a clear knowledge about the state of the fabric and help us to understand a better position and technique to conserve the textile in storage or display area.

Conclusion

History has to be preserved for posterity because present is a continuation of the past. Many literary high thoughts of our past are ridiculed because there are no samples or even fragments of them are available. As we know and as we have established, textiles are as important as literature for a historical fabric. Fortunately many old and highly technical textile families are still available to us. To use these resources, the available textiles will have to be stored in a proper way so that no further deterioration can happen and also the traditional families can come and see, respect their textiles of acclaim. So let us get interested in continuing the tradition and preserving them for posterity. It can thus be seen that care of silk or any object requires not only an understanding of the nature of the objects but also a genuine love for them.

References

1. Akuratti Venkateswara Rao (1973) Handloom Industry in India, National Cooperative Union.
2. Allyson Rae, Lorna Green, Barbara Wills (1994) Guidelines foe the Storage of Textiles in the British Museum, The British Museum-Department of Conservation, London.
3. Agarwal O.P (1965-68) Journal of Indian Museums, Volume XXI-XXIV, New Delhi.
4. Agrawal.O.P, (1965) Textile and Their Care, National Museum, New Delhi.
5. Britannica Junior Encyclopaedia (1982) Encyclopaedia Britannica Inc.
6. Caring for Textiles, American Institute for Conservation of Historic and Artistic Work Preventive Maintenance.

7. Chelna Desai, Ikat Textiles of India, Chronicle Books, San Francisco.
8. Denise Krieger Migdail and Gwen Spicer, American Institute for Conservation of Historic and Artistic Works, info@aic-faic.org
9. Edgar Thruston (1887) The Silk Fabric Industry of the Madras Presidency, Government Press, Madras.
10. Edgar Thurston (1887) The Cotton Fabric Industry of the Madras Presidency, Printed by the Superintendent Government Press, Madras.
11. Encyclopedia of Textiles (1980) Doric Publishing Company,
12. Edwin Holder (1896) Monograph on Dyes and Dyeing in the Madras Presidency.
13. Garry Thomson (1986), The Museum Environment, Butterworth-Heinemann Ltd.
14. Guidelines for the Care of Textiles, Victoria Albert Museum, London.
15. Hadaway W.S. (1909) Monograph on Tensil and Wire in the Madras Presidency, Government Press, Madras.
16. Harle J.C (1986) The Art and Architecture of the Indian Subcontinent.
17. Harold.J.Plenderleith (1957) A History of Conservation, Studies in Conservation, Volume, 43 Number, 3.
18. Havell, E.B, (1912) Basis for Artists and Industrial Revival in India.
19. Havell, E.B. (1900) Essays on Indian Arts Industry and Education.
20. Havell, E.B. (1888) Report Submitted During the Year 1885-1888, The Art and Industries in Madras Presidency.
21. Indian Art through the Ages (1951) Ministry of Information and Broadcasting.
22. Jasleen Dhamija and Jyotindra Jain, Handwoven Fabrics of India.
23. Jasleen Dhamija (1995) Indian Silks, Volume, XLVI No.3, Marg publications.

24. Jeyaraj, V. (1995) Hand Book on Conservation in Museums, Government Museum, Madras.
25. John Irwin (1979) Textiles and Ornaments of India-Indian Textiles in Historical Perspective, The Musem of Morden Art, New York.
26. Karen Finch O.B.E. and Greta Putnam (1977) Caring for Textiles, Victoria and Albert Museum, London.
27. Kharbade, B.V. and Agarwal, O.P (1988) Analysis of Natural Dyes in Indian Historic Textiles, February-1988. Studies in Conservation, The Journal of The International Institute for Conservation of Historic and Artistic Works.
28. Liotard L.Volume-33 Number- 1 (1883) Memorandum on Silk in India, Department of Revenue and Agriculture, Calcutta.
29. Linda Lyton (1995) The Sari, Thames and Hutson Ltd.
30. Ministry of Information and Broadcasting (1951), Indian Art through the Ages.
31. Nair, S.M. (1970-72) Studies in Museology, Volume VI-VIII, Department of Museology, Baroda.
32. Nanditha Krishna (2001) Textiles Displayed in the Vastralayam, The C.P Ramaswami Aiyar Foundation, Chennai.
33. Nathan Stolov (1987) Conservation and Exhibitions, Butterworth & Co (Publisher)Ltd.
34. Nasreen Askari and Liz Arther, Uncut Cloth, Merrell Holberton Publisher, London.
35. Pupul Jayakar (1979) Textiles and Ornaments of India-Indian Fabric in Indian Life, The Museum of Morden Art, New York.
36. RTA Kapur Chishti and Amba Sanyal (1989) Saris of India, Wiley Eastern Ltd and Ami Vastra Kosh.
37. Textile Conservation Workshop (2001) Pest Control in Textile Collections, Regional Alliance for Preservation.

38. Textile Conservation Workshop (2001) Recommended Textile Storage Techniques, Regional Alliance for Preservation.
39. Vijaya Ramaswamy (1985) Textiles and Weavers in Medieval South India, Delhi.
40. Venkataraman, K.S. (1940) The Handloom Industry in South India, Riua College, Bombay.
41. Zaitseva, G.A.(1987) Studies in Conservation, The Journal of The International Institute for Conservation of Historic and Artistic Works, Volume-32 Number-4 November-1987.

* *Research Scholar, Chemical Conservation and Research Laboratory, Government Museum, Chennai - 600 008.*

** *Curator, Chemical Conservation and Research Laboratory, Government Museum, Chennai - 600 008.*

New Trends in Conservation of Art and Cultural Objects

**Dr. V. Jeyaraj*

Introduction

India is very rich in art, cultural and natural heritage. We are going to be judged by not what we have preserved but what we have destroyed either negligently or deliberately. The recent earthquake in Gujarat during 2001 devastated hundreds of monuments and thousands of antiquities beyond repair. On the global scenario, the UNESCO has set the mood over three decades ago by identifying World Heritage Monuments. Countries with lesser heritage than our own are involved with preserving and propagating their antiquity. And we, with the longest living tradition are still not firm on our own legs. Every culture represents a unique and irreplaceable body of values as each people's traditions and forms of expression are its most effective means of demonstrating its presence into the world. The identity of a community is reflected in the legacy it leaves back in the entire evolutionary process and this evidence is in three distinct forms. They are:

1. Tangible forms (in the form of built-up heritage, material culture)
2. Intangible form (in the form of traditions, customs and manners, folklore, etc.)
3. Expressive form (language, music etc)

All such tangible and intangible relics, which we call heritage, serve as tools and sources for an emphatic understanding of the past. Preservation of this heritage in all its connotations is, today, a significant aspect of a well thought out "Culture Management Policy".

The cultural and artistic relics are well preserved in temples, churches, mosques, museums, galleries and related institutions. They were preserved in the traditional way. After the coming of the British,

they tried to import the museum techniques from Britain and the techniques got Indianised to the Indian condition of the environment. Archaeology is the study of the remains of the ancient past culture. The cultural heritage is always under threat due to various agencies whether with or without our knowledge. Various scientific principles, techniques, technologies, methods have come in to our help to preserve our cultural heritage. The conservation and restoration practices are being changed globally and newer methods are coming in to practice to increase the life of the remains of the ancient past for posterity. This paper deals with the new trends in the conservation of cultural, art and archaeological antiquities for posterity.

Conservation Chemistry

It is well established that scientific preservation of archaeological objects dates only from the later half of the 19th Century. There are always methods of preserving valuable objects or restoring them using traditional methods and techniques, which have come down the ages. These traditional methods and techniques used are not always based on a sound scientific evaluation of the condition of the objects or on the principle that the originality of the objects should be preserved to the maximum extent possible. However, the modern scientific discipline, which encompasses the processes of conservation and restoration is termed 'Conservation Science'. Since chemical principles and chemicals are invariably involved in these processes, it is aptly called 'Conservation Chemistry'.

Conservation Chemistry deals not only with the treatment of archaeological objects for the removal of deleterious extraneous materials covering them, but also includes the post study of the real composition of the material of the object, the nature of deterioration it has undergone with the aeons of time, of the environment of the findings and the composition of the product(s) of deterioration. Against these background data, the scientist can choose the safest and mildest method(s) by which this deterioration(s) can be contained. Incidentally, it also extends its investigations into the technique and

the probable real composition of the archaeological objects themselves, which can give an insight into the technological developments down the ages. An art object is one that has been produced with the materials and techniques available at all the ages, by the craftsmen of yore. Moreover, when the object is to be restored, the materials or techniques that are to be adopted to restore the objects back to their pristine shape and appearance, are also to be carefully weighed and meticulously studied by the Conservation Scientists. At the close of 19th Century it was felt that conservation of antiquities was necessary to preserve them for the posterity.

Conservation Policy

In the beginning of the 20th Century, there was no awareness of conservation and it was a new field. Even though there is now awareness in the conservation subject, people go for the preventive conservation instead of interventive conservation. In general it is better to practice preventive conservation than interventive conservation. But unfortunately, people are reluctant to take up conservation work. The author is advocating preventive conservation as most of the persons who are working in museums are non-chemists and they have to be taught how to take care of the objects in their possession. Curators, archaeologists and those who are in-charge of collections of archaeological objects should know the conservation of the objects for their proper preservation. Training should be given to every one in the sphere of their work. People who do not know the conservation science should never be allowed to conserve the objects, unless a trained conservator does not supervise them.

Conservation Practices in Tamil Nadu

There is conservation awareness in Tamil Nadu and the author has advised many organisations on the lines of conservation of objects with them on requests from them to do so. There are still people interested in the traditional methods. For example the Ramanashramam in Thiruvannamalai is interested in the traditional methods of conservation of the materials used by Ramana *Maharishi.*

Traditional Conservation

It was a common practice to fumigate rooms to eradicate insects and fungi with some chemical fumigants. Even today in India in most of the places the Muslim *moulvis* are fumigating houses, shops etc., with camphor, which is a routine scene that one can see.

Palm-leaf manuscripts were kept on the lofts just above the *chulas* in the earlier days in Tamil Nadu. In Tamil Nadu, palm-leaf (*Borassus flabellifer*) manuscript bundles were taken from the lofts in which they were stored and used to spread them in sunlight so that the fungi got eradicated. The owners smeared turmeric powder (*Curcuma longa*) to prevent insects and bundled them with red silk cloth. Red silk is a repellent for most of the insects.

Temple cars made out of wood were applied with *mahua* oil (*Madhuca indica*) and preserved. Due to the application of the *mahua* oil, the wood carvings in the temple car were preserved. Due to the accumulation of dust and other accretions, the oil caked up to give a solid material. During the festive occasions, people used to apply curd and wash the temple cars and once the wooden portions were dried they applied again *mahua* oil and preserved the temple cars.

In India, temples themselves are galleries of art objects. They are made up of stone sculptures, metal objects such as bronze icons, bells, brass utensils, palm-leaf manuscripts, textiles, paintings such as mural paintings, paintings on ceilings, panel paintings etc. In order to preserve the sculptures from the contents used for religious bathing of icons, once in a way they are preserved by preservation methods such as sandal preservation, flour preservation, oil preservation etc. They are nothing but poulticing methods adapted today in conservation. Stone objects were preserved by oil preservation. Most of the temples have the religious practice of application of oil, ghee, butter to stone images.

New Trends in Conservation

Conservation in India has taken a new dimension recently. There is a great awareness of the subject even among the common men. People have realised the importance of conservation. People, in possession of antiquities, were scared about a decade back and now a days they are interested to preserve them by coming forward to register them with the Antiquities Registering Offices. Many craftsmen try to give antique finish to their objects and send them abroad. Conservators are now a days approached for many things related to antiquities. The profession has got a new dimension and many books have come out. Many have come forward to collaborate with museums in many activities related to preservation, security, authenticity etc.

Preventive Conservation

Preventive conservation is getting importance in museums. Use of chemicals also got reduced. Non-evasive methods are used in conservation. Only non-evasive methods of analysis are done on museum antiquities. Museum personnel are giving much importance to the object's environment in terms of microclimate. Individual showcases are kept in an ambient environment. Every body seeks proper bouse keeping in the museum galleries. Light levels are kept in the optimum level. Heat produced by lights is tremendously reduced after the use of fibre optic lighting. The Government Museum, Chennai has installed the fibre optic lighting especially for the oil paintings on canvas executed by the famous Indian Artist, Raja Ravi Varma. In the Contemporary Art Gallery, dichroic halogen lamps have been installed, whicb dissipate the heat produced to the backside of the lamp. Keeping objects in an open environment is normally avoided as dust, moisture etc., very easily affect the objects unless they are not covered. On security point of view, open display is dangerous for the objects, if they are small.

The important strategies of preventive conservation are

1. Know your collection,
2. Know the enemies and identify the enemies of the collection,

3. Avoid the enemies,
4. Block the enemies,
5. Monitor the enemies,
6. React to the enemies and
7. Communicate for safeguarding the collection.

Bio-deterioration

Bio-deterioration in the archaeological objects takes place mainly during the monsoon season and during nights. Moisture is required for the defect to happen. Temperature and relative humidity should be kept in an optimal level in order to keep the organic objects with out any damage due to nature. Even though the climate in Tamil Nadu is quite unfavourable, bio-deterioration should be controlled by the use of fungicides, insecticides and other preventive measures. The bio-degradation of the archaeological objects is due to moss, lichens, liverworts, fungi etc. Besides these, insects play a major role in the degradation of cultural objects.

Organic Materials

Organic materials include paper, textile, palm-leaf, bark, wooden object, bone and ivory, feather, fur, hair, leather etc. They are tender in character due to their easy degradation. Biological activity is very high, as the climate in India is tropical in nature. These objects are cleaned with organic solvents with the help of cotton swabs and coated with paraffin wax in turpentine. Wax coated objects get whitened and there fore now a days the coatings are removed by the use of rectified spirit or benzene and coated with poly vinyl acetate in acetone or citronella oil in rectified spirit. Mostly the fumigation of the affected objects from plants and animals was done with chemicals, which are toxic to the insects, which had affected the objects. But now a days toxic chemicals are not used. Ethoxide is still in use in the archives. People prefer to keep them in an atmosphere of pure air. People are aware of nitrogen fumigation to get rid off the insects in the objects. Fumigants under normal temperature and pressure are used. They are fumigated regularly with thymol to eradicate fungi and with para dichlorobenzene to eradicate insects.

Conservation Equipment and Materials

The conservation in India is the very fast growing field, which has a cherished support by the Government of India. Most of the laboratories are not having much infra structure for the treatment of the objects received for conservation. Many sophisticated instruments are very essential for the conservation of movable archaeological objects as well as to monitor the environment.

Research is very essential to find out new methodology. Many new materials have been imported for restoration of museum objects. Most of them are very costly. Some of the materials used in temperate climate are not suitable for the objects in the tropical climate. The Chemical Conservation and Research Laboratory has sufficient conservation equipment to take up conservation of all types of objects. Simple instruments, necessary for the conservation, like bot spatula for the restoration of oil paintings, all types of microscopes and lenses for examination, analytical instruments like spectro photometer etc., are available. In order to find out the environment, instruments which can find out the lux level, UV light level, temperature, relative humidity combined environmental monitor is available. The Conservation Gallery in the Government Museum, Chennai is fixed with an instrument to look for time, temperature and relative humidity.

Conservation of Textiles

Textile conservation units are available mainly in the Conservation Laboratories of the National Museum, New Delhi and the Salar Jung Museum, Hyderabad. These Laboratories are regularly carrying out the conservation of textiles. At present one volunteer is working in the conservation of textiles in the Government Museum, Chennai. Another one is involved in the research pertaining to textile conservation. Normally no chemical is used in the cleaning of the textiles. In case the textile pieces are damaged, they are lined with similar seasoned cloth using a thin solution of poly vinyl acetate in acetone. *Kalamkari* textiles, silks, cotton sarees etc., have been restored

in the Laboratory. Most of the works are only physical methods. Chemical treatment is almost avoided.

Palm-leaf Manuscripts

Palm-leaf manuscripts are found plenty in India. The conservation work done on palm-leaf manuscripts so far in India has itself been sporadic and localised. There is not enough detailed study of all problems in this field. A good deal of work could be done to standardise the procedures for the conservation of palm-leaf manuscripts and to make available the materials and equivalent required for such conservation. In the beginning some of the palm-leaf bundles were laminated with the help of chiffon cloth. Stuck bundles are cleaned with the percolation of steam and separating them with paper cutters. This Laboratory had bleached many palm leaf manuscripts with the help of sodium chlorite and formaldehyde. Repair with cellulose acetate foil with acetone is the standard cold lamination practice followed here. Fumigation is done with thymol and paradichlorobenzene regularly to avoid the fungi and insects. Only reversible methods are applied.

Wooden Objects

There is a trend in reassembling of wooden structures in sites recreating the original structures. Many agencies are very active in this area. For example the Museum of Mankind, Bhopal; Crafts Museum, New Delhi; Sanskriti, New Delhi; Dakshinachitra, Muttukkadu in Tamil Nadu are recreating the structures in situ made out of wood. Old wooden temple cars also are dismantled and set up in museums. This has been done in National Museum, New Delhi and in Government Museum, Kanyakumari. Most of the museums in Tamil Nadu have woodcarvings in the museums under the control of department of museums. Polymers, wax, gum etc., are used as filling media for consolidation. The Chemical Conservation and Research Laboratory has preserved five temple cars in Thiruchendur, Tirunelveli district, Therazhundur, Thanjavur district and Srimushnam, Villupuram district. Cleaning is done by ammonia, hot sodium carbonate solution,

Laboline, Extran etc. Wooden objects are protected with the help of *AsCu*, a wood preservative. Poly vinyl acetate in acetone or toluene is used as a protective coating to avoid the entry of moisture and dust.

Paintings

In India the various types of paintings preserved in museums are, oil paintings on canvas, panel paintings, paintings on paper, paintings on leather, paintings on palm-leaves, paintings on ivory, *Kalamkari* paintings, glass paintings etc. Restoration of paintings is carried out in the Laboratory regularly for the museum as well as for those who seek the help of the Laboratory on charge basis. Hot relining was in practice and now a days hot relining of canvas paintings is slowly being given up as cold relining is getting importance due to its better preservation of the painting. New polyurethane framing materials with foam boards are introduced to avoid percolation of moisture.

Bronze Objects

The bronzes acquired for the Government Museum, Chennai were mostly treasure-trove finds and were all covered with muddy accretions. The bronzes were treated electrolytically about 20 years back. Chemicals were used for the treatment of bronzes. In order to preserve the edel patina (Basic copper carbonate), the bronze icons were treated with sodium sesque carbonate. In order to remove the malignant patina (Copper chloride) alkaline Rochelle salt solution was used. In order to treat the bronzes with calcareous deposits, sodium hexa meta phosphate was used. Holes were filled with silver oxide paste in rectified spirit. Local corrosions were treated with zinc powder and sodium hydroxide. The author modified the electrolytic treatment and devised a tool called as electrolytic brush to clean local corrosion in which he used a flat stainless steel rod with a sodium hydroxide dipped pad as cathode and the object as anode and passed direct current up to 6 volts for a few minutes. The corrosion spots were eradicated. The portion was used to be washed with cotton pads using distilled water. But the recent trend is to treat the bronze

icons physically. Diseased bronze icons are treated with a 2 % solution of benzotriazole in water or rectified spirit. The Chemical Conservation and Research Laboratory of the Government Museum, Chennai is conducting research on laser technique of surface cleaning of the bronze objects in collaboration with the Centre for Laser Technology, Anna University, Chennai.

In India, especially in Tamil Nadu, there are thousands of bronze icons. Many of them have been stolen from the temples and gone abroad. For example the Nataraja bronze image from Pathur went abroad and is oow brought back to India. Since there is no authentication except the iconography, it is difficult to say whether the bronze image is the same Pathur Nataraja. The soil in the pedestal has made to believe that the Pathur Nataraja is the same that was taken from India. In order to avoid such authentication problem, the Government Museum, Chennai took up a pilot project some time in 1980s and now it is executing the project in a large scale in collaboration with the Indira Gandhi Centre for Atomic Research, Kalpakkam with funds from the Department of Science and Technology. Preventive conservation is given importance. Right levels of relative humidity (50-60%) and temperature (20-25°C) are provided as ambient conditions in the galleries. The Bronze Gallery is airconditioned round the clock now in order to control both temparature and relative humidity.

Iron Objects

Iron objects are plenty in Tamil Nadu. Most of the excavations in Tamil Nadu have revealed plenty of iron weapons either in the completely degraded condition or degraded having metal core. These objects need to be cleaned for the removal of rust or they need to be consolidated when they are completely degraded. In those days the iron objects were consolidated with the help of paraffin wax and benzene. Now a days, the iron objects are consolidated with the help of poly vinyl acetate in toluene either under normal condition or vacuum.

Stone Objects

Tamil Nadu is blessed with thousands of stone monuments and stone sculptures. Some are preserved in the museums. Thousands are lying with out any care in various sites. Government Museum, Chennai has stone objects made of granites, sand stones, dolente, marble, limestone, schist etc. Crystal caskets from Pottiprolu are rare specimens in the museum. In the 1950s use of sodium sulphite, mild acids etc., have been used to clear off the ink stains from stone objects. Poulticing using paper pulp was in vogue to remove soluble salts from the sculptures. Poly vinyl acetate, methyl methacrylate, celluloid etc., were used as protective coatings. To strengthen the sculptures poly vinyl acetate was used in vogue. The earlier methods of conservation are now slowly changing. Sand blasting was done for the removal of surface accretions in Tamil Nadu temples and is now stopped. Use of harmful chemicals is being stopped. Conservators try to use non-aggressive methods of treatment. Normally a water repelling preservative used to be applied over the stone monuments. But the recent trend is to use silicon-based water repellents, which are more effective than the poly methyl methacrylate, poly vinyl acetate etc. In order to remove the accretions from the surface of stone objects, laser cleaning is used. For the removal of oily accretions, poultices such as sepiolite, Fuller's Earth, rice flour, sandal powder with suitable solvents such as rectified spirit, acetone etc., are used. In order to arrest the evaporation of the organic solvents, non-reactive polymers used to cover the poultices. Dusting is done with vacuum cleaners.

The Amaravati limestone sculptures are removed from the walls of the Amaravati Gallery and given treatment to remove the dissolved salts from them.

Fumigation

Fumigation is very important for the eradication of insects and micro-organisms. Now a days integrated pest control measures are done. Close monitoring the insects, the suitable chemicals, their application

are integrated. Insect traps are kept to find out the type of insects. Instead of chemicals for the eradication of the insects and micro-organisms, low nitrogen atmosphere is provided to eradicate the insects etc. Di-ethyl zinc is used for the mass de-acidification of paper materials.

Authenticity in Art

Authenticity is very important aspect of conservation now a days. The originality of the objects should be ascertained. X-ray methods, laser techniques, IR photography, holography, chemical analysis etc., have come in to help in authenticating the museum objects. A project with the Indira Gandhi Centre for Atomic Research, Kalpakkam and another project with the Anna University, Chennai are on in finger printing of bronze icons and holographying bronzes and jewelleries respectively. IR photography is also on with the Indira Gandhi Centre for Atomic Research, Kalpakkam in order to authenticate pigments in paintings.

Conservation Gallery

The Chemical Conservation and Research Laboratory of the Government Museum, Chennai has set up a Conservation Gallery in the First Floor of the Bronze Gallery to educate the visiting public on conservation of the cultural and art heritage. It has attracted many in the subject. This gallery has used computer application to prepare the panels, labels etc. The show cases are made up of alumnium channels, MDF boards and glass panes. Dichloric halogen lamps light up the gallery. This gallery is the first of its kind in India.

Publication

Publication is very important as far as any subject is concerned. There were not many books in the subject of conservation. New Conservation publications are many in the Government Museum, Chennai. These books are available for sale in the sales counter of the museum. The publications of the Laboratory are on display in the Conservation Gallery also. Many research and popular papers in

conservation are published in various journals besides books, guidebooks and brochures. Many of the books by the author have been prescribed as text books in conservation in many universities.

Training

Training is a very important aspect of conservation. The current trends are taught to the persons connected with conservation of art and cultural heritage. Training is given to museum Curators, Archaeologists, Archaeological Engineers, Police Officials, Executive Officers of the Hindu Religious and Charitable Eodowments etc., in conserving our cultural and art heritage. The author has coined a term called as Neo Conservation. This is extract conservation work after training sufficiently the interested persons.

Research

Research is one of the important aspects of conservation. New methods and materials for conservation are researched upon for preserving the past for posterity. In order to do more research in the field, the Chemical Conservation and Research Laboratory of the Government Museum, Chennai has got recognised as a research institution by the Madras University and four research students are working in the Laboratory for the award of Ph. D. Degree undet the guidance of the author. The research done brings in new methods and materials in conservation.

Conclusion

Most of the museums in Tamil Nadu are archaeological museums or multi-disciplinary museums having the archaeology wing in them. The conservation of archaeological, art and cultural objects is very important, as they have to be preserved for posterity. The specialised branch called Archaeological Chemistry is helpful in the preservation of archaeological objects.

References

1. Agrawal, O. P. & Shashi Dhawan (1989) Bio-deterioration of Cultural Property, Proceedings of the International Conference.
2. Agrawal, O.P. and Sinha, S. N (1992) Conservation Status of Manuscripts, Books, Archival and Like Materials, INTACH Indian Conservation Institute, Lucknow.
3. Agrawal, O.P. (1991) Conservation in India-Attainments and Challenges, Conservation of Cultural Property in India, Silver Jubilee Volume.
4. Agrawal, O.P. (1993) Preservation of Art Objects and Library Materials, National Book House, India.
5. Arun Ghose (1989) Conservation and Restoration of Cultural Heritage, Agam Kala Prakashan, Delhi.
6. Bisht, A. S. (1998) Challenges in Conservation of Indian Miniatures, V Silver Jubilee Lecture, IASC, New Delhi.
7. Bisht, A.S. (1983&1984) Training of Conservation Personnel in India-A Need of the Hour, Conservation of Cultural Property in India, Vol. XVI&XVII.
8. Cesareo, R., S. Sciuti and M. Marabelli (1973) Non-destructive Analysis of Ancient Bronzes, Studies in Conservation, 18.
9. Earle R. Caley (1951) Early History and Literature of Archaeological Chemistry, Journal of Chemical Education.
10. Grace Morley, ICOM and Museums in Asia, Studies in Museology, Vol. VI-VIII.
11. Harinarayana, N. (1994) Commitment to Conservation, Second Silver Jubilee Lecture, Indian Association for the Study of Conservation of Cultural Property, New Delhi.
12. Harinarayana, N. (1995) Techniques of Conservation of Palm-leaf Manuscripts: Ancient and Modern, Palm-leaf and other Manuscripts in Indian Languages, Institute of Asian Studies, Chennai.
13. Harinarayana, N. and Jeyaraj, V. (2002) Care of Museum Objects, Government Musuem, Chennai.

14. ICCROM Newsletter, September 1997, International Centre for the Preservation and Restoration of Cultural Property, Italy.
15. Indian Council of Historical Research, Grants-in-aid, Schemes of the Council, New Delhi, 1988-89.
16. Jeyaraj, V. and Vasanthakumari, A. B. (1993) Let Us Preserve Our Art and Culture (North Arcot), Released by the National Service Scheme Units, D. K. M. College for Women, Vellore.
17. Jeyaraj, V. (1999) Museums in Tamil Nadu, Report Prepared under the Auspices of the Nehru Trust for Indian Collections at the Victoria and Albert Museum, New Delhi.
18. Jeyaraj, V. (Editor) (1999) Conservation of Cultural Property, Proceedings of the Seminar on Conservation of Cultural Property, Government Museum, Chennai.
19. Jeyaraj, V. (2002) Handbook on Conservation in Museums, Government Museum, Chennai.
20. Jeyaraj, V. (2002) Care of Paintings, Government Museum, Chennai.
21. Jeyaraj, V. (2002) Metal Conservation, Government Museum, Chennai.
22. Jeyaraj, V. (2003) Manual for the Conservation Gallery, Government Museum, Chennai.
23. Joshi, Binduvasini, R. (1989) Preservation of Palm-leaf Manuscripts, Conservation of Cultural Property in India, Vol. XXII, New Delhi.
24. Lal, B.B. (1983 & 1984) Training in Conservation, Conservation of Cultural Property in India, Vol. XVI&XVII.
25. Mac Leod, Ian D., and Pitrun, Marck (1988) Metallurgy of Copper and its Alloys Recovered from Nineteenth Century Shipwrecks, (Book), Archaeometry, Australian Studies.
26. Nair, M. V. (1993) National Research Laboratory for Conservation of Cultural Property, Government of India, Department of Culture, Lucknow.

27. Nair, M.V. (1985-87) A New Method of Relaxing Brittle Palm-leaves, Conservation of Cultural Property in India, Vol. XVIII-XX, New Delhi.

28. Oddy, W. A. & Hughes, M. J. (1973) Specific Gravity Method for the Analysis of Ancient Bronzes, Studies in Conservation, Vol. 18.

29. Raghavendra Rao, V. S. Trambake, R. S. and Shrikant Misra (1996) Fumigation of Painted Caves of Ajanta-Technical Aspects and Methodology, Conservation of Cultural Property in India, Vol. 29.

30. Subbaraman, S. (1992) Conservation of Wall Paintings, A State-of-the-Art Report, Application of Science & Technology in Conservation of Cultural Property (ASTECH), Lucknow, 10-11 July 1992.

31. Surya Wanshi, D.G. (1992) Improving the Flexibility of Palmleaf, Restaurator, Vol. 13, No. 1.

32. Tej Singh, (1998) Conservation of Cultural Property in India, Theme paper presented in the Conference organised by the Secretary, Department of Culture, Government of India, in National Museum, New Delhi for the Culture Secretaries of State and Directors of Museums of States, 26-28, August, 1998.

33. Thangavelu, S. (1991) Palm-leaf Manuscripts and Their Preservation, Proceedings of Silver Jubilee Seminar on Conservation of Cultural Property, Lucknow.

34. Zvi Goffer, (1980) Archaeological Chemistry, John Wiley & Sons.

* *Curator, Chemical Conservation and Research Laboratory, Government Museum, Chennai - 600 008.*

Campus of the Government Museum, Chennai.
(Virtual View)

Visit us at
www.chennaimuseum.org
for more information about this museum